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TREATMENT OF ACUTE INFECTIOUS AND CONTAGIOUS DISEASES

WITH ESPECIAL REFERENCE TO SCARLET FEVER, ERYSIPELAS, MEASLES AND MENINGITIS.*

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NEW ORLEANS

Recent studies by Dochez and the Dicks in the treatment of scarlet fever, and by Birkhaug [1] in the treatment of erysipelas, have focused attention on the treatment of acute infectious diseases in general. Advances in the treatment of scarlet fever by specific serum offer definite steps forward in the handling of this specific infectious and contagious disease. Various forms of treatment of other infections have been described in the last few years which have also done much to reduce the mortality and diminish the morbidity rate of these diseases.

For the purpose of this paper I have reviewed the histories of the patients who were admitted to the contagious disease ward of the New Orleans Charity Hospital for the last eleven months, during which time I have been connected with this particular service. I will touch briefly on the treatment of the diseases that are quarantined in this ward, and will pay especial attention to scarlet fever, erysipelas, meningitis and measles. Diseases such as mumps, chickenpox, smallpox, encephalitis and diphtheria do not present new features on which I shall dwell at any length.

In the thirty-three cases of chickenpox that I had the opportunity of seeing, all presented such mild forms of this disorder that there is nothing of particular moment to which I will call attention. The same generalization applies to the few cases (twelve) of mumps. The seven patients with smallpox who entered the Charity Hospital were transferred to the Isolation Hospital of New Orleans as soon as a diagnosis was made. Twelve cases of Vincent's angina were seen and were treated in one of several ways. Arsphenamine was used both intravenously and locally (0.9 Gm. in 30 cc. of glycerin), but was not used in this fashion in every case. Vincent's angina is an intractable disease, difficult to cure, and I could not see any particular difference in the course of the disease in those patients who were treated by arsphenamine and those who were treated by the other usual local applications and mouth washes.

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1. Birkhaug, K. E.: Studies on the Biology of Streptococcus Erysipelatis: III. Experimental Production of Erysipelas in Rabbits, and Demonstration of the Protective Power of Immune Erysipelas Sera, Bull. Johns Hopkins Hosp. 37: 307 (Nov.) 1925.

DIPHTHERIA

The fifty-six patients with faucial and tonsillar diphtheria all recovered except one child who had a severe phlegmatous inflammation of the floor of the mouth. The routine treatment of these patients is the administration of 20,000 units of antitoxin. In small children under 3 years of age requiring large doses, this is administered in divided doses. Ten thousand units is given intramuscularly and 10,000 intraperitoneally. The diagnosis in all these cases was confirmed by cultures. In practically none of the cases was it necessary to repeat the initial dose of antitoxin. Ten cases of diphtheria of the nose, ear or conjunctiva were also treated by antitoxin, but it is well known that *Bacillus diphtheriae* infection of the middle ear or the nose is extremely difficult to eradicate. Cultures remain positive for long periods after all systemic symptoms have disappeared, and local symptoms persist with a pertinacity that is most discouraging. In the local treatment of these cases, gentian violet is employed. Irrigation of the nose and ears proved beneficial in getting rid of the organisms. Forty-seven cases of laryngeal diphtheria were encountered. The children suffering from this severe type of diphtheria were given an initial dose of antitoxin of from 20,000 to 30,000 units, and if there was not a very prompt improvement in their symptoms, the dose was repeated in eight hours. Tracheotomy was performed in a large number of these cases. It was done on all the patients who died.

In explanation of the death rate of 27.7 per cent, it should be stated that practically every person that died came to the hospital in a moribund condition, and tracheotomy had to be performed immediately in order to save the child from suffocating. The same generalization applies to almost all the cases of laryngeal diphtheria. The patients were not admitted to the hospital until they were extremely ill. Almost without exception they had not received antitoxin or had had antitoxin in insufficient dosage. Many of these patients died as a result of pneumonia, which may have been due to the operation to save their lives, but usually their lungs showed evidence of the complication on admission to the ward. Those children who died of laryngeal diphtheria of course could have been saved by the proper and early administration of antitoxin had physicians been called. They were so ill when they were admitted to the hospital that they died before antitoxin could have very much effect.

WHOOPING COUGH

Forty-one children with whooping cough were under observation, and of these forty-one, ten died from the complicating bronchopneumonia, the deaths occurring in small babies under 2 years of age who were brought

into the hospital frequently in the last stages of this disease. The only new therapeutic procedure that has been employed in the treatment of this disorder is ether. In a few patients, in order to control the severe paroxysms of cough, ether was given intramuscularly, but its use has been discontinued because it has proved painful and has caused severe sloughing of the subcutaneous tissues. I believe that ether, 10 cc. in oil, injected into the rectum every eight hours, is equally efficacious in controlling the severe paroxysmal cough. It is certainly to be preferred to the injections under the skin. Neither vaccine nor any form of so-called specific therapy has been used because the disease is well advanced when the children enter the hospital. Furthermore, it is not believed that it has any effect, and most certainly not in cases that have lasted for many days.

The discussion of the treatment of scarlet fever, meningitis, measles and erysipelas deserves somewhat more detail because of the relatively new methods employed in these diseases.

SCARLET FEVER

The treatment of scarlet fever has been revolutionized in the last few years by placing on the market the antistreptococcal serum of Dochez. The reports of men in clinical work who have used this serum have been, for the most part, most favorable. Blake,[2] Thenebe,[3] Park,[4] and Friedemann and Deicher[5] have been most enthusiastic in their appreciation of this new remedy. Graham,[6] on the contrary, has not been pleased with the use of Dochez' serum, and has found that serum disease occurred in twenty-one cases out of a possible thirty-one. Twenty-seven of these patients, however, were given their treatments for the purpose of immunization.

There have been treated twenty-eight cases of scarlet fever with the serum as prepared by a method modified somewhat from that of Dochez and now obtainable on the open market. The dose of the serum given was 10 cc. and it is given intramuscularly. The very prompt disappearance of the rash, the drop in temperature and the freedom from complications testify to the efficacy of this preparation. It is fortunate that scarlet fever (at least this applies to the cases that were hospitalized) is recognized promptly, and admission to the hospital occurs almost immediately after the appearance of the rash. Therefore it was possible to see the majority of the cases in the first two or three days of the disease.

In analyzing these cases, it was found that the rash disappeared in the majority within twenty-four hours after the injection of this serum. The throat symptoms disappeared rapidly, and the fever fell by crisis or rapid lysis shortly after the injection of the serum. The falling temperature has not been as rapid as the disappearance of the rash, and whereas the rash would have disappeared within from twelve to twenty-four hours after the injection of the serum, the fever may last two or three days, or there may be a tendency to a sharp drop followed by a small rise which lasts a day or two. In only one of the cases was there a severe serum reaction. This was in one of the few patients who was an adult. It occurred in a young woman who had had the disease three days before she was admitted to the hospital, and whose temperature fell promptly but rose again, and with whom it was thought necessary to repeat the dose. The rash was gone twenty-four hours after the second dose, but severe urticaria developed five days later, which lasted for three days and caused considerable discomfort. It is interesting to note in this connection that the desquamation is usually very slight, and of particularly practical importance is the fact that patients can be discharged from the hospital in a comparatively short time after they have been admitted. Repeatedly, patients were discharged seven or eight days after they were sent in to the ward, and no case of secondary scarlet fever has appeared in their families. This is a distinct advance over the prolonged hospitalization which was considered necessary in the past and which has been dangerous to the children in a contagious disease ward or hospital because of the possibility of crossed infection occurring. Twenty-eight cases have been treated with this serum without any deaths and without complications except the one case in which the serum reaction occurred.

MENINGITIS

The mortality rate in meningitis is in inverse ratio to that of scarlet fever. Of the twenty-nine patients who were admitted with a diagnosis of meningitis, twenty-eight died. Eighteen of these were caused by pneumococci, five by the tubercle bacillus, one by an indefinite streptococcus, two by influenza bacilli, two by meningococci, and one by some undetermined organism. The treatment of tuberculous meningitis cases has always offered unsurmountable difficulties, and death is the rule. Acting on the supposition that the tubercle bacillus is particularly nonresistant to oxygen, and having seen the satisfactory effects of merely opening the abdomen in cases of tuberculous peritonitis, the last three patients with tuberculous meningitis that have been admitted to the ward have been treated with intraspinal injections of oxygen. Daily drainage of the spinal canal followed by the introduction of oxygen has been employed. The oxygen has been given in doses of 15 cc. gently injected through a spinal puncture needle. The last patient with this disease was treated with combined cisternal-lumbar puncture, the oxygen being introduced through the cisterna route with a needle in large quantities until it bubbles from the needle in the spine. This needle was then taken out and about 5 cc. of oxygen under very gentle pressure was introduced by the cisternal needle, which was then withdrawn. There was a very definite improvement in the patients to whom oxygen was given. In fact, in one case I believed that the child was going to recover. Although on admission it looked as if the patient in whom the cisternal puncture was made would die within a few hours, it was some days before death occurred.

Unaware of the work of others, about March, 1926, I began in our pneumococcic cases to endeavor to lavage the spinal canal by means of the combined cisternal lumbar puncture, in one case with promptly fatal results, apparently from using too great a pressure in injecting salt solution to force the thick, creamy pus through the needle in the lower end of the spine. In later cases, gentle lavage with saline solution followed by the injection of polyvalent antipneumococcic serum

2. Blake, F. G., and Frask, J. D.: The Treatment of Scarlet Fever with Antitoxin, Boston M. & S. J. **193**: 659 (Oct. 8) 1925.
3. Thenebe, C. L.: Observations on the Administration of Dochez' Antiscarlatinal Serum Intravenously, Boston M. & S. J. **192**: 939 (May 14) 1925; Further Observations on the Administration of Dochez' Scarlatinal Antitoxin, ibid. **193**: 497 (Sept. 10) 1925.
4. Park, W. H.: Scarlet Fever, J. A. M. A. **85**: 1180 (Oct. 17) 1925.
5. Friedemann, U., and Deicher, H.: Deutsche Med. Wchnschr. **51**: 1935 (Nov. 20) 1925.
6. Graham, R. H.: Dochez' Scarlet Fever Antitoxin in Thirty-One Cases, J. A. M. A. **85**: 95 (July 11) 1925.

has been used. Here again I believe there has been some improvement in these patients, but the condition has not been cured. In the one case of meningococcic meningitis in which the patient survived, this method was also used. The patient had been sick for three and one-half weeks before admission to the hospital. She had already received serum intravenously and intraspinally in small doses. On admission, the spinal fluid was found turbid, under pressure, with a cell count of 1,700. Cisternal puncture was performed the next day, and serum was injected into the cisterna and also into the lumbar spinal canal. This was repeated in three days. Daily drainage of the spinal canal was also carried out followed by the injection of serum in somewhat smaller amounts than the amount of fluid withdrawn. The patient's cell count rose to 3,000 and then gradually fell to 70. In all, 107 cc. of serum was given the patient.

MEASLES

The treatment of measles with convalescent serum is not in any sense new, but I wish to speak a word as to its efficacy. There is a prompt disappearance of the rash, and relief of the subjective and objective symptoms. The dose of convalescent serum has not been the same in every case, since we do not always have serum available except in very limited quantities. The procedure has been to bleed the patient just before discharge from the hospital, allow the blood to clot, decant the serum, and add 0.5 per cent tricresol. The serum is kept until the next case of measles occurs. Necessarily, in small children we can get only a small amount of blood, and our cases are so limited that we have been able to give to a patient only the serum taken from the blood of the previous case. Never have we been able to secure enough serum to pool the combined serums from six or more patients.

ERYSIPELAS

During the last eleven months there have been thirty-one cases of erysipelas in the contagious disease ward, with two deaths. One death may be attributed in part to the disease, but this patient was suffering from severe cardiac decompensation when admitted to the ward, and death can be attributed to this and erysipelas considered as a contributory cause. The other death was that of a small child with widespread erysipelas of the lower half of the body and with severe toxemia.

Shortly after the publication of a method of treatment suggested by Rivers and Tillett,[7] I commenced to treat patients having erysipelas with this form of treatment. These authors show that when small areas of skin are infiltrated with normal or immune serum, these areas become more refractory than normal skin to infection with hemolytic streptococci, and suggest that in erysipelas the spread of infection might be prevented by injections into the margins of the healthy skin of immune serum. In fourteen cases of erysipelas, such injections were made. The technic was varied considerably. In most of the cases, intracutaneous injections of antistreptococcal serum were given, infiltrating, as is done with local anethesia, around the borders of the erysipelatous process. In the majority of cases, the process would extend to the infiltrated area and then stop, it was found. In severe cases it was possible to demonstrate beautifully the block that this would cause in the inflammatory skin process by injecting only half way across the lesion, which would then spread over the area where the serum had not been injected, but which would stop at the barrier. In some of my cases, such as erysipelas of the face, this protective barrier was put much too much below the process to have very much effect, as for example a collar round the neck of a patient suffering from facial erysipelas. This method of treatment I believe to be very efficacious in stopping the local spread of the disease. It does not, however, seem to have very much immediate effect on the general toxic symptoms and, in addition, has the disadvantage that it is time-consuming to inject a large area in such a way that the entire bordering skin is infiltrated completely.

The last eleven cases have been treated entirely with antistreptococcic serum, following the introduction of this antitoxin by commercial firms, prepared according to the directions of Birkhaug. The value of this serum has been well demonstrated by Birkhaug.[8] He reports on the treatment of sixty patients with erysipelas antitoxin, and has come to the conclusion that there is a specific type of hemolytic streptococcus infection which may be controlled by a specific serum prepared by Dochez' technic of injecting agar masses infected with streptococci into a horse, and that this serum is definitely antitoxic. The observations made in the Charity Hospital substantiate the claims of Birkhaug. In the eleven patients to whom this serum has been given, there was a prompt amelioration of the toxic symptoms, a sharp drop in temperature and rapid disappearance of the lesion. It is my opinion that Birkhaug's serum offers a very distinct method in the control of this disease. In severe cases in the future, when they are not controlled by the antitoxin or are controlled imperfectly, I shall not only give the serum intramuscularly, or possibly intravenously, but shall combine with it the infiltration method suggested by Rivers and Tillett. At present, it hardly seems necessary to use this method when the patients are seen sufficiently early in the course of the disease to be benefited or cured by 20 cc., equivalent to 500,000 skin test units, of the concentrated serum.

CONCLUSIONS

The results at the Charity Hospital in New Orleans with antiscarlatinal serum and with erysipelas antistreptococcic serum have been definitely and unfailingly good. A definite, specific cure is available for the treatment of these two diseases. In meningitis, combined cisternal and lumbar puncture certainly offers a distinct advantage in the treatment of this lethal disease as compared with simple lumbar puncture and the injection of serum through the lumbar opening. Patients with measles are much benefited by the injection of the serum of blood of convalescents.

1551 Canal Street.

7. Rivers, T. M., and Tillett, W. S.: Local Passive Immunity in the Skin of Rabbits to Infection with (1) a Filtrable Virus, and (2) Hemolytic Streptococci, J. Exper. Med. **41**: 185 (Feb.) 1925.

8. Birkhaug, K. E.: Erysipelas: V. Observations on the Etiology and Treatment with Erysipelas Antistreptococcic Serum, J. A. M. A. **86**: 1411 (May 8) 1926.

Research and Genius.—Every research worker must have genius, if we define as genius an infinite capacity for taking pains. He must devote almost unlimited care and attention to even the smallest and apparently most insignificant details of his work, for it is often in the little things that error arises. Allied to patience is the stubbornness and determination not to be beaten by the difficulties of the problem until these have been overcome or until it is realized that the problem is insusceptible of solution in the present state of our knowledge.—Bigger, J. W.: *Irish J. M. Sc.* **6**:19 (Jan.) 1927.

THE NATURE OF SHOCK SYMPTOMS OCCASIONALLY FOLLOWING DRUGS OR VACCINES*

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The etiology and nature of certain manifestations following immediately or shortly after the injection of drugs or foreign proteins, such as serums, vaccines or nonspecific agents, have been the subject of studies since the first observations of these phenomena in medical therapy. The true recognition of their mechanism, i. e., the participation of the organs and tissues involved in such a general body reaction, had to be known in order to overcome the disturbances connected with them.

PREVIOUS OBSERVATIONS

It is quite easy to understand why the usual physiologic and pharmacologic methods have as yet failed to reveal the mechanism of these attacks, because of their appearance in human beings only and because of their apparent dependence on certain individual factors. Practitioners and clinicians know that certain patients will always react with an attack of more or less severity after the administration of serums or arsphenamines, while others tolerate high doses and frequent injections without the slightest inconvenience. The same is true of very similar attacks of so-called idiosyncrasy after the taking of such foods as milk. Our studies on this subject have been carried out with such patients. They were selected from many thousands who did not show any reaction after the administration of arsphenamines or serums. They have been based mainly on the clinical observation of individual susceptibility toward such attacks, and have been chiefly devoted to the study of the alteration of organ functions, or their clinical appearance during an attack. The object has been to find, first of all, the correct pathologic basis for these often alarming conditions. From clinical observations it is well known that such sudden and usually brief attacks do not leave any trace of pathologic changes, either clinically or histologically. Therefore, it could not be expected that in an attempt to duplicate these attacks in animals, even if that were possible, any valuable histologic discoveries could be made which would reveal the nature of these conditions in man. The same clinical experience was the reason for concentrating our efforts on the attempt to determine the functional changes as, for instance, during the period of the so-called nitritoid crisis, in order to ascertain the origin of the clinical manifestations. These studies have led to the recognition of many changes that occur in organs, in tissues and in vessels during an attack.

A brief recapitulation of these observations as described in former publications[1] may be given here:

Under normal conditions of life, every organ is in a state of functional equilibrium which may best be designated as the tonus of the particular organ or tissue existing at the time of the determination, recognizable from clinical and physical examination. Thus, the skin under normal conditions possesses certain characteristics which in healthy individuals are reflected in its natural appearance. Psychic irritations (fear, joy, etc.), change in temperature (cold), or other reasons (chills) cause a considerable involuntary change of the tonus of the skin. For instance, after certain psychic irritations, the skin becomes pale because of the involuntary contraction of the skin vessels. It becomes less permeable; the water elimination through the skin decreases and so does the electrical conductivity. This phenomenon is not pathologic because it may be transient and readily reversible, nor does any change take place in the histologic appearance of the skin tissues. All parts of the skin involuntarily act the same or are compelled to act as if they were under the influence of local application of epinephrine, demonstrating clearly that a vegetative nerve influence is being exercised on the skin during the period of the described manifestations, changing and restricting the biologic functions of the skin during the period of its action.

An opposite change in tonus is also well known. When they are exposed to heat or are in a hypoglycemic state, as after an overdosage of insulin or at the end of a chill, the skin vessels involuntarily become dilated. Skin functions, such as releasing heat, are increased, often to a maximal effect. Water elimination is increased, and cells and tissues as well as the endothelial cells become highly permeable. With it appears clinically an intensive perspiration. We have designated such a clinical phenomenon as a "parasympathetic state of the skin." This does not necessarily indicate that such a state of skin tonus or any similar tonus of organs or tissues is caused by a stimulation of the parasympathetic nerve fibers or of the vagus. It merely indicates the resulting tonus type of the local conditions visible to or determinable by the observer. In the same way, we shall call the opposite state a local "sympathetic overbalance," which produces a "sympathetic tonus" indicating the local change of the organs or tissues observed. It might be mentioned in this connection that this terminology has been particularly chosen in order to distinguish these phenomena clearly from what is called "vagotonia." A general vagotonia, that is, a general dilatation of the entire vascular system, including all body organs, never occurs. Whenever organs clinically show vasodilatation, other organs will show an opposite vascular tonus, thus balancing the physical condition of the vascular system. Therefore, in all our discussions of the questions involved we will confine ourselves to those phenomena which actually could be observed. Theoretical conclusions will not be made as to whether or not certain nerve fibers have carried the stimulus which manifests itself in the observed tonus change, and whether or not other organs or the entire body will show similar changes in their circulatory tonus, which situation would be partly assumed when speaking of vagotonia. We know that this clinical designation of tonus change of the skin as well as of other organs or tissues varies from the usual nomenclature as found in pharmacologic and physiologic textbooks, but the clinician is not able to utilize organs and then to stimulate certain isolated nerves. He is not even highly interested in that phase of the question but is observant rather of changes in tissue tonus which he finds frequently in the course of disease and in which he does not observe nerve stimulation but tissue reactions which depend

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1. Müller, E. F.: München. med. Wchnschr. 73:9 (Jan. 1) 1926.

obviously on nerve influences. It is therefore believed that all work such as this should be based on actual clinical observations, regardless of whether or not this state is caused by a cooperative or a single action of vegetative nerves. Clinical observations always lead to positive statements as to the actual effect in changes of tissue tonus. Therefore, they can be positively applied as a basis of actual autonomic changes in tissue tonus and tissue functions caused by definite vegetative stimuli. We must leave open the question of how these stimuli reach the reacting tissues and organs, and where they are originated.

CHANGES OBSERVED

Such clinical designation of tonus change expressed by an observed state of the vegetative equilibrium of the particular organ (for instance, the skin) became necessary when we succeeded in observing [2] a definite connection between the functions of different organs, which may be briefly summarized as follows:

Intimately connected with the well known changes of skin tonus as mentioned above are changes in the tonus and in the functions of the abdominal organs. This correlation holds true with minor as well as extreme changes of condition. But the vegetative reaction of the organs of the abdominal region will always be found to change in a direction opposite to that of the skin. Thus it could be established that without exception the onset of a "sympathetic overbalance" of the skin tonus (vasocontraction) is connected with a vasodilatation designated as a "parasympathetic overbalance" of the organs of the splanchnic region.

Experiments have demonstrated that the permeability of the vascular endothelium of the splanchnic region always shows clearly a reaction opposite to that of the peripheral organs and tissues of which the skin is only one part. It was also demonstrated [3] in animals that organic activities of the liver (measurable, for instance, by the flow of lymph through a thoracic duct cannula and by the lymph concentration) increase when the skin vessels become contracted and the skin functions decrease, and vice versa. The same is true of the activity of the stomach, another organ of the splanchnic region, in its relation to the activity and to tonus changes of the peripheral organs. Recently we [4] were able to prove that, whenever a change of skin tonus takes place, an opposite change in gastric tonus and gastric activities could be observed.

Sympathetic overbalance of the skin (contraction of the vessels, decrease of the permeability of the skin cells and tissues and decrease of the skin functions) corresponds to stomach dilatation, connected with increased cellular activities noticeable by increased permeability and increased production of gastric juice. An opposite orientation of the skin, with dilatation of the vessels, increase in cell permeability and increase in functional action corresponds to a decrease of cellular activity of the stomach, contraction of the vessels in the splanchnic region, decreased permeability and decreased biologic action, such as the production of stomach juice or of lymph. The latter state is connected with demonstrable contraction of the stomach walls. These results have been determined in human beings as well as in animals by tracing the stomach movements with a kymograph connected to an inflated rubber balloon in the stomach and by determination of acid production galvanometrically and by titration. It has been shown in several publications that this intimate relationship between the two groups of organs exists throughout life. Even the physiologic waves consisting of small increases and decreases in organic functions, such as can be traced from different organs in the course of a day, correspond in the same way between the two groups of organs as during intensive tonus changes. This phenomenon has been designated as "splanchnoperipheral equilibrium." It characterizes the significance of a close nerve connection between the two groups of organs, the opposite reactions of which are evident in almost every physiologic process in the body and can be studied particularly when sudden tonus changes become clinically manifest.

EFFECT OF PROTEINS ON LEUKOCYTES

In the very beginning of the studies on tonus changes in different organs a peculiar phenomenon was observed, the nature of which has now been fully revealed. It has been found that leukocytes of the neutrophil polymorphonuclear type are increased in number whenever vessels become dilated. Their number decreases when vessels become contracted. This has been repeatedly confirmed. The phenomenon itself represents perhaps the finest clinically available reaction because the leukocytes respond to the slightest vascular change and thus make it possible to determine such changes when other methods fail.[5]

A few examples of such changes in the number of leukocytes might be given to illustrate its clinical importance. More detailed descriptions will be found in the respective publications.

It has been stated above that such a vascular contraction of the periphery corresponds to a vascular dilatation of the splanchnic region combined with certain changes in organic activities. If, for instance, one follows the number of leukocytes found in the peripheral blood during a chill in a patient with malarial fever, a sudden decrease of the number will be found to accompany the onset of the chill, followed by an increase when the temperature decreases. The largest increase in number usually occurs during the perspiration after the chill. The opposite state to that during a malarial chill is seen during a hypoglycemic state such as is readily observed after an overdosage of insulin. During the state of insulin shock, the leukocytes increase rapidly in numbers up to 20,000 or more in the peripheral vessels, and immediately disappear when sugar is given by mouth. In animal experiments it has been shown that during the time of the sudden increase or decrease of the number of leukocytes in the periphery there is a corresponding decrease or increase of leukocytes in the splanchnic region. This statement is based on actual leukocyte counts, made under certain experimental conditions; for instance, after the application of arsphenamine, and by histologic observations in the liver.

Studies in connection with this peculiar phenomenon of a sudden change in the distribution of leukocytes, leading to a sudden leukopenia or leukocytosis in the peripheral vessels, have demonstrated that the same changes, even if not so intensive, follow the slightest alteration in the vasomotor reaction, making it possible

2. Müller, E. F., and Petersen, W. F.: Klin. Wchnschr. **5**: 53 (Jan. 8), 137 (Jan. 22) 1926.
3. Petersen, W. F., and Müller, E. F.: Ztschr. f. d. ges. exper. Med., to be published.
4. Müller, E. F., and Petersen, W. F.: Proc. Soc. Exp. Biol. & Med. **24**: 155, 1926.
5. Müller, E. F.: Evidence of Nervous Control of Leukocytic Activity by the Involuntary Nervous System, Arch. Int. Med. **37**: 268 (Feb.) 1926.

to determine the temporary reaction indicated by the tonus waves of the splanchnic-peripheral equilibrium.

It is obvious that a single leukocyte count is not able to show anything about this vasomotor phenomenon; but curves obtained from counts made at short intervals will point to changes in the skin tonus as well as indirectly in that of the splanchnic region by the tendency of their increase or decrease in number. By this method one is able to determine even slight changes in the vascular equilibrium of the body, such as frequently follow minor skin irritations and which cannot be determined in any other way. Thus it could be shown that rubbing the skin or the intradermal injection of nonirritating albumin or of saline solution and even of air resulted in an immediate decrease in the number of leukocytes which, according to the previously described conditions, indicate an increase of the same leukocytes, now differently distributed, in the splanchnic region. This phenomenon is only one part of the tonus change in the splanchnic region corresponding to a slight "sympathetic" (vasocontracting) change of the skin following such an intradermal injection of nonspecific proteins or other skin irritations. It demonstrates the close relationship between the functions of the skin and those of the abdominal organs, which, as stated, are inseparably connected in even their slight physiologic changes. It may be mentioned here that, from newly completed investigations, the same slight skin irritations, such as intradermal protein injections, which lead to a decrease in the number of leukocytes in the periphery cause, simultaneously with this leukocyte fall, a dilatation of the stomach and an increase in the production of gastric juice, demonstrating from another point of view the intimate connection between the leukocytic reaction to changes in organic activities.

This interesting leukocytic phenomenon has been mentioned in this connection because it affords clinical opportunity of determining such slight tonus changes in the skin and the simultaneous reaction taking place in the abdominal organs. Of course, this leukocytic reaction represents only one part of the blood change following the opposite vasomotor stimulation of the two groups of organs.

SKIN CHANGES FOLLOWING PROTEIN INJECTIONS

In the foregoing paragraphs the close connection between the skin, as one part of the peripheral system, and the organs of the splanchnic region has been described, and it has been particularly emphasized that this connection is due to an action of the vegetative nervous system controlling the tonus of the two groups of organs which always react in opposite directions. This nerve connection between the two groups has been studied in cases in which the nerves accompanying the great vessels have been severed surgically (sympathectomy).

If, for instance, the entire skin or parts of it are exposed to intensive cold, a phenomenon, known to the layman as goose flesh, results. If the activity of the stomach and of the lymph production in animals is observed during the period of the application of cold, the opposite stimulation in the abdominal region, namely, dilatation of the stomach and increased activity in that area to correspond to the contracted vessels and the diminished activity of the skin (shivering), being exposed to cold, takes place. If cold is applied to the leg of an animal or to a patient in whom a sympathectomy has been performed, such a reaction does not take place in the abdominal region, although it can be demonstrated easily when the same cold is applied to the leg which has not been operated on.

If one injects protein solution intradermally in the sound leg of such a patient, just as in every normal or sick human being, the tonus change of the skin and abdominal region can be demonstrated in an immediate decrease in the numbers of peripheral leukocytes; but if the same intradermal injection is made in the operated leg, such a leukocyte fall does not take place. These facts, which are given in detail in a previous article,[6] demonstrate clearly, from another point of view, that the vegetative nerves constitute the actual anatomic and functional connection between the two groups of organs.

This fact is of importance in many different respects. It is the underlying basis of the Widal hemoclastic crisis,[3] of the leukocytosis found during the period of digestion and of many other interesting clinical phenomena. It is of clinical significance as the underlying principle of the well established connection between skin functions and some of the abdominal organs, especially the digestive tract. One of them might be mentioned. With the onset of a chill, sudden vomiting is a well known clinical occurrence. It consists of a sudden dilatation of the stomach simultaneously to and equally intensive as the contraction of the skin vessels which easily can be observed during the onset of the chill.[7] The same connection can be understood when, as a result of an irritation of the peritoneum as in peritonitis or after a perforation of a gastric or duodenal ulcer, the skin suddenly shows the pale, constricted epidermis which is well known as the important clinical phenomenon in the condition mentioned.

The same nervous connection between the abdominal region and skin plays an important part in many skin disorders, such as general pruritus and other metabolic diseases in which hyperglycemia occurs quite frequently, demonstrating the association of skin and liver disturbances.

LIVER SYMPATHETIC; PERIPHERY PARASYMPATHETIC

These examples have been mentioned only to illustrate the importance of this nervous connection between the two groups of organs based on an undisturbed vegetative nervous system. The leukocytic phenomenon which indicates tonus changes has to be considered as only one of the determinable phenomena caused by the vegetative control of tissue tonus.

REACTION OF PERIPHERAL VESSELS TO SERUMS

If an intravenous injection of arsphenamine or neoarsphenamine is given to a normal person or to a syphilitic patient, there is almost invariably a more or less intensive decrease in the number of leukocytes in the peripheral vessels. It shows obviously that body reaction takes place with a more or less marked change of skin and splanchnic tonus. The latter is easily demonstrated by means of the kymographic examination of the stomach as described above. In cases of so-called nitritoid crisis, a very intensive leukocyte fall has been observed and described[8] in ten such cases in a series of about 4,000 patients injected with arsphenamines. According to the evidence on the splanchnoperipheral equilibrium and the significance of its

6. Embden H., and Freundlich, H.: Biol. Verein Hamburg, Feb. 3 and 17, 1925.
7. Müller, E. F.: München. med. Wchnschr. **73**: 1349 (Aug. 13) 1926.
8. Rosen, Isadore; Müller, E. F., and Myers, C. N.: Studies on Complex Nitritoid Crisis After the Intravenous Administration of Arsenicals, Arch. Dermat. & Syph. **10**: 316 (Sept.) 1924; Relation of Silver Arsphenamine to Involuntary Nervous System and So-Called Nitritoid Crisis, ibid. **10**: 607 (Nov.) 1924.

change, when a leukocyte fall takes place in the periphery the conclusion had been drawn that a sudden reaction of the entire vasomotor and vascular system follows every injection of arsphenamine. This reaction usually is without major clinical manifestations, although in certain sensitive patients the vasomotor reaction is of great intensity, leading not only to a more intensive contraction of the skin but also to an increased dilatation of the abdominal region followed by clinical manifestations from the digestive tract. Clinically, this is familiar. We know that patients with sudden attacks following the injection of arsphenamine and other drugs become suddenly pale (even a real chill is not unusual in these persons), and often vomiting occurs immediately or a short while after the injection. This pale cyanotic appearance of the patient may be very short or may last for a few minutes, and then usually is followed by a sudden redness or even by perspiration. The leukocyte fall does not show anything more than just what the clinical manifestations demonstrated; namely, the sudden change of the tonus in the two groups of organs caused obviously by the vegetative nervous system which controls not only the vessels but also the physiologic functions of the organs.

Recently completed studies to be published prove this observation from a different point of view. Kymographic tracings of an empty stomach were made in a trained dog. The dog showed moderately intensive stomach contractions, normal temperature and, within normal limits, comparatively high numbers of leukocytes (blood taken from an ear vein). The dog was given 0.01 Gm. of neoarsphenamine per kilogram of body weight (as usually given in man). A few minutes after the injection was made, a decrease in the leukocytes was observed when they dropped from 8,800 to 5,200. At the same time, a distinct change in the stomach movement was noticeable. The contractions ceased entirely and a flat curve without even the usual small waves of the normal stomach followed this first part of the intensive contractions, showing clearly the simultaneous tonus change of the stomach and the change in the distribution of the leukocytes between the periphery and the abdominal region. The same results could be repeated in other tests. In such cases the stomach dilatation remains effective as long as the leukocytes show temporary decrease. If a protein is given in very small amounts intradermally in human beings, the same reaction of leukocytes and stomach will be observed for a period of about ten to fifteen minutes. If protein or arsphenamine is given intravenously, the reaction on the involuntary nervous system, measured by stomach tracings, is almost of the same duration and very probably is dependent on the speed with which the particular agent disappears from the blood. The quicker the absorption, the more intensive seems the action.

Supplementary experiments have been carried out in animals in which the dosages of arsphenamine and other drugs have been increased so much that actual vomiting occurred. The observations on the leukocyte and stomach reactions was about the same as in human beings. The lymph production increased accordingly. It was interesting to note that even in cases in which a large dosage caused stomach dilatation accompanied by vomiting, this vomiting was not caused by any contraction of the stomach. It depended entirely on pressure from the abdominal muscles which, for a short period during which the animal was apparently nauseated, exercised pressure on the dilated stomach. Vomiting occurred during the dilatation with simultaneously increased production of stomach juice, which obviously depended on this vegetative control.

The stimulation, or the reaction, of the vegetative nervous system in arsphenamine reactions, which doubtless is the cause of the clinical manifestations in the skin and in the digestive tract whenever they occur, leads to another very interesting phenomenon which is only one of the many reasons why skin reactions as well as skin diseases should always be considered from a general medical point of view. During the time of skin contraction heat release is diminished, and through the increased activity of the abdominal region heat production increases. Thus it is clear why temperature increase must follow more prolonged reactions of the described type. Exact temperature measurements always show a minor increase, even if the reaction is without subjective sensations to the patient. Consequently, it may be understood why a nitritoid crisis of a severe character is able to produce temperature increase without any infection, because of an increased heat production in the abdominal region which cannot be released through the skin because of the simultaneous contraction of the skin vessels and the conclusive decrease of the heat releasing skin functions.

Hanzlik and Thienes,[9] in checking up these results obtained with arsphenamine, made the following experiments: The ordinary Magnus strip method, with longitudinal muscles of the intestines and uterus immersed in warm aerated Tyrode solution, was employed. Then different drugs were added directly to the bath in a concentration approximately such as would be expected in the blood of a 60 Kg. man after injection of 0.9 Gm. of arsphenamine; i. e., exceeding our dosages in patients at least one half. It is of greatest interest to note that in the majority of the tests examined after these excessively high dosages, negative effects were observed. Among twenty experiments, ten did not react at all, three showed depression, and only in two could a slow increase in tonus of the rabbit uterus (followed by recovery) be obtained. Hanzlik and Thienes assume that even these were due chiefly to the alkalinity of the medium. With neoarsphenamine, a concentration of 1:5,000 did not have demonstrable effects. Their experiments are still more interesting so far as tests with epinephrine and pilocarpine are concerned. The authors could demonstrate that arsphenamine does not change the well known action of this drug entirely when added, thus demonstrating that arsphenamine does not incite any noteworthy alteration on the smooth muscles of the intestines when brought into immediate contact with them.

In connection with the former discussion, these experiments show clearly that the reaction of the abdominal region as described and confirmed by sufficient clinical and experimental evidence is not caused by a direct contact between arsphenamine and the reacting organs. The work of Hanzlik and Thienes is clear in that respect. It confirms our observations pharmacologically which already pointed to a similar conclusion; namely, that there could not exist a direct influence of the arsphenamine on the reacting organs because a directly opposite reaction in two groups of

9. Hanzlik, P. J., and Thienes, C. H.: Alleged Stimulation of Autonomic Nervous System in Arsphenamine Reactions, Arch. Dermat. & Syph. **14**: 382 (Oct.) 1926.

organs could not be caused by any circulating drug. Skin vessels contract and the vascular endothelium of all the peripheral vessels probably becomes less permeable, while at the same time all the splanchnic vessels dilate, their vascular endothelium becomes more permeable, and their organic activities increase while those of the skin and the skeletal muscles decrease. This obviously could not be caused by one and the same direct stimulation from a circulating agent or from an agent which is deposited in the two regions alike. Therefore, the conclusions of our studies were that different tonus changes, apparently dependent on nervous stimulation, follow the injection of a drug, which become evident in "sympathetic" or "parasympathetic" reactions in different body organs.

COMMENT

The tonus changes of different organs after the administration of arsphenamine in human beings and in animals provide an interesting example of the manner of their interpretation medically and pharmacologically. Hanzlik and Thienes in their reported experiments on excised smooth muscles of the intestines and of the rabbit uterus have observed that these do not react toward arsphenamine as they would toward autonomic drugs, such as epinephrine and philocarpine. This, doubtless, can be interpreted by concluding that the arsphenamine does not have a direct influence on the smooth muscles, but the authors of these articles go much farther. They conclude that tonus change is not possible in these muscles after arsphenamine is given in man. Hanzlik and Thienes furthermore demonstrate in tests with urethanized rabbits that freshly prepared solutions of arsphenamine and neoarsphenamine in single and repeated doses resulted in a temporary depression of the circulation, characterized by a fall in the blood pressure and other tonus changes. It is difficult to determine how much urethane affects the mechanism which we have observed in human beings and animals, but the described depression of the circulation and the fall in blood pressure correspond to the observations described above in which almost every dilatation of the vascular system of the splanchnic region shows the same more or less distinct decrease of the blood pressure. A depression in the circulation obviously corresponds to a dilatation of this particular region.

From a clinical point of view, all experiments and clinical data should be considered as only definite parts of the entire phenomenon in question. If excised muscles do not react toward arsphenamine, this is not proof that a patient never vomits after intravenous administration of the same drug, but it certainly should serve as a proof that arsphenamine per se, in the concentration usually administered, or other drugs have not necessarily a toxic action on the smooth muscles of the intestines, and if tonus changes of the described nature occur—and they are known to the clinician—this would indicate that they are caused by the individual reactivity of this particular patient rather than by the toxicity of the drug. The latter has been the main result of our clinical studies, now so well confirmed by the pharmacologic tests of Hanzlik and Thienes.

By clinical observation it is easily possible to determine what kind of functional changes connected with vasomotor changes appear in organs and tissues. Thus it can be determined whether these functional changes are characterized by vasocontraction or by vasodilatation; whether they are associated with an increase or with a decrease in the activity of the particular group of organs. It is obvious that such increase or decrease in endothelial permeability, in vascular capacity and in vegetatively controlled organic function depends on this vegetative control of the organs involved, and that this control is exercised, at least in part, by the involuntary nerves. We could show how severing of the nerves abates these involuntary reactions. But it is still unknown which nerves are particularly responsible for the reaction and which vegetative center controls their activities. This is to be left to future studies.

In the meantime, determinable tonus changes as the result of changes in the vegetative control of the particular organs will be the only objective basis for the question as to whether or not the vegetative nerves are involved in a reaction following the application of a drug. Since we know that the two groups (splanchnic organs and those of the periphery) always react in an opposite manner toward changes in the balance of the involuntary nerves, we know that such changes cannot have been produced by a like direct contact, such as after the local application and consequent direct action of autonomic drugs. Even if a special center in the brain would be responsible for the stated involuntary reaction, this always would take place in the manner described. The organic symptoms must be considered as being the different local manifestations of a reaction of the entire body, demonstrating by these clinical symptoms of a definite character the close connection of the organic function in the body controlled by a cooperative synergistic action of the vegetative nerves.

SUMMARY

Evidence has been found that the clinical symptoms of sudden attacks, such as those designated "nitritoid crisis," occasionally following the intravenous injection of arsphenamine and other drugs or serums, are caused by a sudden reaction of the entire vascular system as well as of almost all organs in the body. This reaction is largely the same as a reaction following the injection of living organisms (chill, etc.). Chills and nitritoid crises do not occur before the foreign bodies (drugs, bacterial toxins, proteins) have been deposited in the tissues. Therefore, drugs like arsphenamine, which disappear from the circulation almost instantaneously, give an early opportunity for general reaction, which in the case of bacterial invasion cannot occur before they are dissolved and their toxins are distributed. Such a general reaction consists of a more or less intensive contraction of the peripheral vessels with simultaneously decreased activities of the peripheral organs, skin and muscles. At the same time, an equally intensive vasodilatation takes place in the splanchnic region connected with an increase in the functional activities of the splanchnic organs (increased production of lymph, of stomach juice, acid, etc.). The latter frequently is associated with nausea and vomiting.

This entire reaction, differing in the two groups of organs, is connected with definite changes in the distribution of leukocytes. It is not known whether a special center in the brain is responsible for that reaction.

The systemic reaction designated as "nitritoid crisis," and manifested by definite vasomotor phenomena in all organs involved, is obviously a reaction of the vegetative nervous system. It depends in its clinical intensity merely on an exaggeration of biologic reactions normally manifest in every individual after the administration of arsphenamine, vaccines, serums and proteins.

THE DICK TEST, WITH ACTIVE AND PASSIVE IMMUNIZATION FOR SCARLET FEVER *

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During January, February and March, 1926, scarlet fever developed in epidemic proportions among the students of the School of Agriculture at the University of Minnesota. The enrolment at this school is made up largely of boys and girls of high school age, and the large majority of these come from farm homes scattered throughout the state. The average age of this group was about 17 years. These students live in dormitories on the University Farm campus, and eat in a large dining hall provided for their use. The dormitories do not provide single rooms, but two, three and four students in a room is the common arrangement. Conditions favored the spread of the disease in this group, as a result of the repeated contacts established in class rooms, in gymnasium and drill classes, at meal times, and in visiting one another in the dormitories after school hours. The most important factor favoring the spread of scarlet fever in this outbreak was the mild type of the disease with which we were dealing, which invariably gives rise to mild, missed cases.

The first case appeared, January 10. A history of known exposure was not given, but the patient was probably infected by some one having a mild, unrecognized case of the disease. The roommates of this boy, as well as those eating at the same table in the dining hall, were inspected twice daily for a period of one week, but none of them developed scarlet fever. Eleven days after the first case had been isolated in the hospital, the second case developed, strengthening our first presumption that the source of infection was a missed case, since neither of these boys had been off the campus since their return to school after the Christmas vacation. Routine inspection of roommates and other students in close contact with each patient was carried out, and for a period of about six weeks all students were inspected in the armory each morning before going to classes. Approximately 50 per cent of the cases of scarlet fever were detected at this early morning inspection by the finding of a rash. The only complaint of these students was, in most instances, a mildly sore throat, a few even not having this, although injection of the throat was present and there was some elevation of temperature. Exposure of susceptible persons by this type of case was, therefore, very common, and favored the continuance of the epidemic.

Immediately following the appearance of the first case of scarlet fever, all students were called in to the Health Service Dispensary and a Dick test was applied. Two tests were applied to the first sixty-eight students, test material supplied by two different manufacturers being used. One test was applied on the right arm, and the other on the left. The results were the same except in two cases, one product giving two more positive reactions than the other. For the remaining tests we used the test material which gave the higher percentage of positive reactors. A total of 530 students were given the Dick test, 395 boys and 135 girls. Of the 530 Dick tests, 264 were positive and 266 negative, or 49.8 per cent of the students were found susceptible to scarlet fever as indicated by the positive Dick test.

We have obtained practically parallel figures for the Schick test in University of Minnesota students. The percentage of susceptible persons in this series was considerably higher (49.8 per cent) than is reported for the same age group (26.3 per cent) by Zingher [1] of New York. This may possibly be accounted for by the fact that practically all of these students come from Minnesota farms, and have not had the repeated exposure to the scarlatinal streptococcus that those in densely populated urban centers have had. The Dick test in 395 boys gave 50.8 per cent positive reactions, and in 135 girls, 46.6 per cent positive reactions. Of sixty-six students who had had scarlet fever, seven students, or 10.6 per cent, gave a positive Dick test. Nesbit [2] reports 40 per cent positive reactions to the Dick test in school children with a previous history of scarlet fever.

ACTIVE IMMUNIZATION

All students having a positive Dick test were advised to take scarlatinal toxin as a means of developing an active immunity. For this purpose we used scarlatinal toxin detoxified with 2 per cent sodium ricinoleate, as described by Larson.[3] The dose was 1 cc. containing 3,000 skin test doses. This material was prepared for us each day in Dr. Larson's laboratory to insure maximal potency. We were interested in determining the percentage of Dick positive reactors that could be converted to Dick negative reactors by means of one injection of the detoxified toxin, so we did not urge a second injection of the toxin in many cases until the Dick test was found to be positive on retesting at from two to four weeks after the first injection. Of 120 students who received only one injection of the toxin and who were retested at varying periods, seventy-six, or 63.3 per cent, were found to be negative. The test became negative as early as the eighth day and the majority were negative by the sixteenth day. Twenty-eight students who remained positive after one injection received a second injection of the toxin, and eighteen of these, or 64.2 per cent, became Dick negative. The second injection was given at an average of 16.8 days after the first. Approximately 100 students who had positive Dick tests and received the toxin did not report for a retest, so their records were incomplete.

REACTIONS FOLLOWING INJECTION OF SCARLATINAL TOXIN

Twenty-eight students reported to the dispensary complaining of headache and malaise; in some instances an elevation of temperature of from 99 F. to 99.6 F. was noted following the injection of toxin. Two of this number developed fever, sore throat and a rash, about twenty-four to thirty-six hours after the injection, and desquamation occurred from the sixth to the ninth day. These two cases resembled scarlet fever in every detail, and although we felt that the condition was produced by the toxin, we isolated the patients

* Read before the Staff of the Lymanhurst School for Tuberculous Children, Minneapolis, Nov. 23, 1926.

* From the Department of Preventive Medicine and Public Health and the Students' Health Service, University of Minnesota.

1. Zingher, Abraham: Dick Test in Normal Persons and in Acute and Convalescent Cases of Scarlet Fever, J. A. M. A. **83**: 432 (Aug. 9) 1924.

2. Nesbit, O. B.: Dick Test and Immunization Against Scarlet Fever, J. A. M. A. **84**: 805 (March 14) 1925.

3. Larson, W. P.; Huenekens, E. J., and Colby, Woodard: Immunization Against Scarlet Fever with Toxin Detoxified with Sodium Ricinoleate, J. A. M. A. **86**: 1000 (April 3) 1926.

for a period of one week. Ten of the twenty-eight students who had reactions following the injection of toxin became Dick negative, a much lower percentage (37.7 per cent) than that obtained in the entire group (63.3 per cent).

THE DICK TEST IN FORTY-EIGHT CASES OF SCARLET FEVER

At the onset of symptoms in forty-eight cases of scarlet fever, the Dick test was negative in fifteen cases, or 31.2 per cent. Of these fifteen students with negative Dick tests, eleven had originally negative tests and had not received immunizing toxin, while four had been converted from positive to negative as a result of the toxin injection. A review of the hospital records of those students who had negative Dick tests at the time they developed scarlet fever does not reveal any essential differences in the course or severity of the disease, as compared with the group having a positive test at the onset of the disease. All the scarlet fever cases gave a negative Dick test during convalescence. The report of Silcock [4] is interesting in that his series also included forty-eight cases of scarlet fever with the same number, fifteen, having a negative Dick test from the first to the fifth day of the disease.

All students having a negative skin test at the onset of the disease were retested with different toxins,[5] and invariably the same negative result was obtained. Other workers have reported similar results. Debré [6] and his co-workers found the Dick test to be negative in ten of nineteen cases at the onset of scarlet fever. The conclusion which we naturally must draw from such evidence is that a negative skin test does not necessarily mean an immunity to scarlet fever. And, too, individuals with markedly positive Dick tests are seen who have not developed the disease after repeated and prolonged exposures. One of the physicians on our staff, who has had charge of our scarlet fever cases for several years, had a strongly positive Dick test until just recently, when he received immunizing toxin. This is in keeping with the work of Sherwood, Nigg and Baumgartner,[7] who recently observed that American Indians seem to have a high degree of natural, racial immunity to scarlet fever, yet the skin test would indicate that susceptibility to the disease closely parallels that found among whites.

When students with negative Dick tests continued to develop scarlet fever, we felt that this might be explained in one of two ways; namely, (1) the Dick test did not contain sufficient toxin to detect all the susceptible persons; or (2) we were dealing with several strains of toxin, one or more of which was not present in the toxin used in the skin test. If the first condition held true, it would appear that an individual might have sufficient antitoxin to neutralize the amount of toxin used in the skin test dose, yet not a sufficient amount to withstand an infection with scarlet fever. Four of the fifteen students with negative Dick tests who developed scarlet fever had become Dick negative as a result of toxin immunization, and it seemed just possible that we might have avoided infection in these cases if we had carried our immunization beyond the level at which a negative skin test was obtained. We therefore decided to try stronger dilutions of the toxin for use in the skin test. For this purpose we used a dilution giving ten skin test doses in each 0.2 cc., this being the same volume as used in the regular skin test, but containing ten times the amount of toxin used in the standard Dick test. Thirty-five students who were originally Dick negative were tested with this ten strength toxin. Thirty-four of the thirty-five, or 97.1 per cent, gave negative reactions to this larger amount of toxin. Twenty-eight students who were Dick negative as a result of toxin immunization were also tested with the ten strength dose. Ten of these, or 35.7 per cent, were found to be negative. These results would seem to indicate that the skin test is not deficient so far as the amount of toxin employed is concerned, since thirty-four of the thirty-five students who gave originally negative Dick reactions also did not show any reaction when the ten strength test was used. Since fifteen of the forty-eight that developed scarlet fever had a negative Dick test at the onset of the disease, it seems quite possible that in this outbreak at least we were dealing with more than one strain of toxin. Various workers hold entirely different views regarding the specificity, as an etiologic factor, of the hemolytic streptococcus isolated from scarlet fever patients. Gorter and de Korte [8] believe that the filtrate of streptococcus cultures contains the virus of scarlet fever but not the true toxin associated with the disease. Deicher,[9] on the other hand, confirms completely the work of the Dicks on the etiology of the disease. He points out, however, that not every streptococcus isolated from scarlet fever produces a good toxin, and also that streptococci from other sources as well as some of those from scarlet fever patients produce other toxins which are not specific. Zingher [1] does not report such a discrepancy in his series of 141 cases of scarlet fever, in which the Dick test was positive in each case in the early stage of the disease. Different epidemics of scarlet fever may therefore show wide variations in the behavior of the Dick test at the onset of the disease, and further work on this phase of the subject, carried out in different parts of the country, will aid materially in determining just what significance a negative Dick test may have as an indication of immunity to scarlet fever.

Although our results in producing active immunity, as measured by the skin test, have been most promising in this series, we feel that we should not have waited such long periods in order to determine whether or not we were going to obtain a negative skin test from one injection of toxin. Two or even three injections, at weekly intervals, with increasing dosage, should probably serve to produce a higher degree of immunity than we obtained. The injection did not cause a reaction in a majority of the adults we have treated, and when these did occur, they were minimal. Horse serum was not used in this preparation of the toxin for immunizing purposes, so that sensitization to this form of protein is avoided.

SCHULTZ-CHARLTON PHENOMENON

The localized blanching of the scarlet fever rash by the intradermal injection of scarlatinal antitoxin and convalescent serum was obtained in fifteen cases in which this test was applied. Both materials were used

4. Silcock, F. A. E.: Lancet **2**: 1324 (Dec. 26) 1925.
5. A toxin supplied by a manufacturer licensed by the Scarlet Fever Committee was used in these retests.
6. Debré, R.; Lamy, M., and Bonnet, H.: Bull. et mém. Soc. méd. d. hôp. de Paris **50**: 452 (March 19) 1926.
7. Sherwood, N. P.; Nigg, C., and Baumgartner, L.: J. Immunol. **11**: 343 (May) 1926.
8. Gorter, E., and de Korte, M.: Nederl. Maandschr. v. Geneesk **13**: 383, 1926.
9. Deicher, H.: Jahrb. f. Kinderh. **112**: 74 (March) 1926.

in all the cases, in amounts of from 0.5 to 0.75 cc. The use of smaller amounts, 0.2 cc., has not given satisfactory results in our experience. The refined, concentrated antitoxin, prepared by the Dick method, was used. Blanching was noted as early as twelve hours after the injection of convalescent serum, but did not appear, in the majority of cases, until from eighteen to twenty-four hours after the injection of antitoxin. Rarely was blanching present at from eight to twelve hours, as is commonly described. In this series, the blanching produced by the concentrated antitoxin was most pronounced at from forty-eight to sixty hours after injection, and although the local fading was very distinct, it was not as complete, in most cases, as that produced by the serum from convalescents. We should ordinarily expect that the concentrated antitoxin, having a much greater antitoxic content than convalescent serum, should produce a more complete blanching than that obtained from convalescent serum, and that the blanching should appear at least equally early. It would appear from our results, however, that the convalescent serum was distinctly more specific in its neutralizing power than was the concentrated antitoxin.

SCARLATINAL ANTITOXIN AS A PROPHYLACTIC

Eleven students who were definitely exposed to scarlet fever and who were known to have positive Dick tests at the time of exposure were given varying doses of scarlatinal antitoxin as a prophylactic. Only one of these developed scarlet fever, but this was not until twenty-five days after the antitoxin had been given. The dosage used in this case was the amount that would neutralize 150,000 skin test doses of the toxin. Cushing and Longpre [10] report that 9 per cent of nurses entering the contagious disease service in Montreal hospitals developed scarlet fever after receiving prophylactic doses of antitoxin, whereas 15 per cent had contracted the disease previous to the adoption of this method of protection. In their experience the immunity gained by the use of antitoxin did not last more than three weeks, and cases that developed at the end of this time were of a mild type.

Five students who had received prophylactic doses of the concentrated antitoxin were given the Dick test at varying periods of from four to twelve days after the injection. Four of the five gave positive Dick reactions, including the one previously mentioned who developed scarlet fever after receiving the amount that would neutralize 150,000 skin test doses. The Dick test was positive in this case on the eighth day after the student received the antitoxin. In another case the Dick test was positive on the fourth, eighth and twelfth days after sufficient antitoxin to neutralize 50,000 skin test doses had been given, and in one case the Dick test was negative on the seventh day after half of this amount had been received.

SUMMARY

Of forty-eight patients with scarlet fever, fifteen, or 31.2 per cent, had negative Dick tests at the onset of the disease. A negative test, therefore, does not seem to be a reliable index of immunity to the disease, and cannot be relied on as an aid in the diagnosis of doubtful cases of scarlet fever.

The Dick test was positive in 49.8 per cent of 530 students from rural Minnesota homes with an average age of about 17 years.

Sixty-three per cent of Dick positive reactors were rendered Dick negative by one injection of 3,000 skin test doses of toxin detoxified with 2 per cent sodium ricinoleate. This method of producing active immunity should prove highly efficient when further studies determine the number of injections and dosage best to be employed.

The injection of convalescent serum intradermally produced an earlier and more complete local blanching of the scarlet fever rash than did the concentrated antitoxin prepared by the Dick method.

The Dick test remained positive in four of five cases following the injection of prophylactic doses of scarlatinal antitoxin.

10. Cushing and Longpre: Union méd. du Canada **55**: 1-66, 1926.

THE USE OF EPHEDRINE IN SPINAL ANESTHESIA

PRELIMINARY REPORT *

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Every one who has used spinal anesthesia for any considerable period is impressed with two facts: first, that it is a wonderfully satisfactory anesthesia for urologic cases, and, second, that there often occurs a marked depressive effect during and after the anesthesia which cannot be accounted for by the operation alone and which constitutes an element of grave danger. It is perhaps well understood that this element of danger is due to the marked fall in blood pressure that takes place. We conceived the idea that the best way to combat this untoward effect of spinal anesthesia was to devise a means of sustaining the blood pressure throughout the period of anesthesia. In this connection we called to mind what Major and Stevenson [1] had pointed out regarding the blood pressure raising qualities of methyl guanidine, but we were rather afraid to use so toxic a substance since it had the property of raising the blood pressure much higher and sustaining it over a much longer period than was necessary for our purpose. Epinephrine is too fleeting in its action. Ephedrine seemed to be a drug that would exactly meet our requirements.

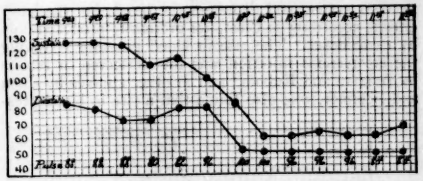

Chart 1.—Spinal anesthesia for perineal operation: At 9 o'clock, morphine, one-fourth grain (16 mg.) and scopolamine, 1/150 grain (0.4 mg.) were given; at 9:40, 150 mg. of procaine hydrochloride was injected; patient asleep most of the time; not nauseated; ephedrine not used; there was a marked and dangerous drop in blood pressure; the low levels of pressure in spinal anesthesia frequently reach a systolic reading of 30 millimeters of mercury.

* From the Department of Urology, Bell Memorial Hospital, University of Kansas School of Medicine.

* Read before the Southwestern Branch of the American Urological Association, St. Louis, Nov. 1, 1926.

1. Major, R. H., and Stevenson, Walter: Effect of Methyl Guanidine on Blood Pressure, Bull. Johns Hopkins Hosp. **35**: 140 (May) 1924.

Chen and Schmidt[2] have reviewed the history and pharmacologic action of this interesting drug, which has been known in Chinese medicine for more than 5,000 years, and quoting various authorities, show that from the stems of the plant, which is indigenous to China, where it is known as ma huang, there has been isolated an alkaloidal active principle known as ephedrine. We reviewed the pharmacologic action as set forth by Chen,[3] and need not enter into that side of the question except to say that its action is similar to that of epinephrine, which indeed it resembles chemically, and is due to the stimulation of the sympathetic nervous system. In addition, it stimulates the central nervous system and depresses the heart; but the latter effects, according to Chen, are ordinarily produced only by toxic doses. The rise in blood pressure following the intravenous injection was first observed in rabbits by Amatsu and Kubota,[4] and in other animals by Chen and Schmidt, who also found that a rise in blood pressure followed the oral administration of the drug. These facts led us to believe that ephedrine would be a practical aid in spinal anesthesia. In the short time that we have applied ourselves to the study of this drug, we have used it in twenty-four cases of spinal anesthesia with results that have been uniformly good. Our technic of spinal anesthesia is very simple, and consists of first making a blood pressure reading and then doing the puncture, withdrawing 10 cc. of spinal fluid, discarding 5 cc., and in the remaining 5 cc. of fluid dissolving from 125 to 200 mg. of sterile procaine hydrochloride crystals. The fluid is then replaced in the subdural space. When the blood pressure has fallen 10 per cent, ephedrine is given subcutaneously and the blood pressure reading is noted at ten minute intervals. In the first few cases, ephedrine was given by mouth; while its action was delayed, its effect on blood pressure was markedly to increase it. We have not observed untoward effects from either the subcutaneous or oral administration of this alkaloid. We found that it was best to seek to prevent the drop rather than to permit the pressure to fall too low before giving the ephedrine, as the rise from levels below a systolic pressure of 80 was rather retarded. This is in line with Chen's observation. We used 0.1 Gm. of ephedrine subcutaneously before the systolic pressure dropped below 100 mm. of mercury. We also noted an increase in the pulse rate. The amount of procaine hydrochloride used in the anesthesia bears some relation to the rapidity and seriousness of the fall in pressure. In young persons in good health, the fall in pressure is not so marked as in older and more depleted patients.

In three cases, we noted a drop of more than 30 mm. of mercury within ten minutes from a simple therapeutic spinal puncture.

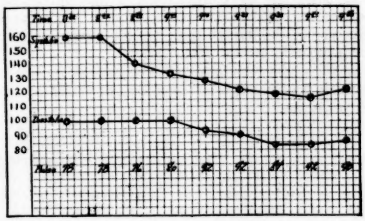

Chart 2.—Spinal anesthesia for a long perineal operation: At 8:30, 0.1 Gm. of ephedrine by mouth; patient not nauseated; asleep most of the time. At 8:40, injection of procaine hydrochloride, 175 mg. At 9:30, morphine, 16 mg.; scopolamine, 0.4 mg. Blood pressure falls, but not to a dangerous level, the fall in the diastolic is not as marked as the systolic. The patient's condition at the close of the operation was excellent.

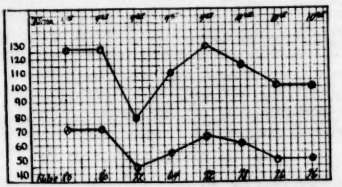

Chart 3.—Spinal anesthesia for suprapubic prostatectomy: At 8:30, morphine, 16 mg.; scopolamine, 0.4 mg. At 9:25, injection of procaine hydrochloride, 175 mg. At 9:35, ephedrine, 0.1 Gm., subcutaneously, ten minutes after the spinal puncture, during which time a drop of 50 mm. of mercury had taken place. The ephedrine brought the pressure back to the original level in fifty minutes.

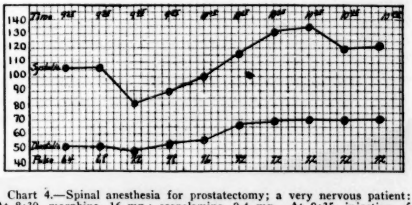

Chart 4.—Spinal anesthesia for prostatectomy; a very nervous patient: At 8:30, morphine, 16 mg.; scopolamine, 0.4 mg. At 9:35, injection of procaine hydrochloride, 175 mg. At 9:45, ephedrine, 0.1 Gm., subcutaneously. The ephedrine continued to act and the blood pressure reached its peak fifty minutes after the subcutaneous injection. Hypotension cases are especially bad spinal anesthesia risks.

CONCLUSIONS

While these observations were made on a relatively small series of cases, we believe that ephedrine is of immense practical use in spinal anesthesia. We conclude that although in fully 90 per cent of the spinal anesthesia patients there is a dangerous drop in both the systolic and the diastolic blood pressure, the judicious use of ephedrine successfully restores the right amount of arterial tension necessary for well being.

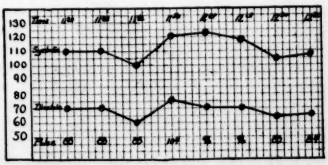

Chart 5.—Spinal anesthesia for prostatectomy. The patient's cardiovascular system was such that a marked and sudden drop in blood pressure might have been fatal: At 10:30, morphine, 16 mg.; scopolamine, 0.4 mg. At 11:30, injection of procaine hydrochloride, 175 mg. At 11:40, ephedrine, 0.1 Gm., subcutaneously. Patient quiet; not nauseated. It is important that marked or sudden fluctuation does not take place in the diastolic pressure. A stormy convalesence ensued because of the cardiovascular disease.

1025 Argyle Building.

2. Chen, K. K., and Schmidt, C. F.: The Action and Clinical Use of Ephedrine, J. A. M. A. **87**: 836 (Sept. 11) 1926.
3. Chen, K. K.: A Pharmacognostic and Chemical Study of Ma Huang, J. Am. Pharm. A. **14**: 189, 1924.
4. Amatsu, H., and Kubota, S.: Ueber die pharmakologischen wirking des Ephedrins und Mydriatins.

INTOXICATION WITH COMMERCIAL METHYL CHLORIDE

REPORT OF A SERIES OF CASES

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The growing complexity of modern industry brings increasingly larger problems for medicine in the identification and prevention of new industrial diseases. With the development of modern refrigeration, there has sprung up in a short time a huge new industry for the manufacture of refrigeration machines.

Various substances are used as refrigerants, the most common and oldest being ammonia, sulphur dioxide and recently methyl chloride.

Methyl chloride, while used extensively in the chemical industries and as a local anesthetic, has received little or no attention in the literature of industrial hygiene, and even toxicologists have failed to consider it of sufficient importance to require more than passing notice. Since this substance has come into more general use as the cooling medium in refrigerators, its toxicological importance demands attention.

LITERATURE

In a survey of the literature one finds few references concerning the toxicity of methyl chloride. When this substance is mentioned it is usually grouped with chloroform or ethyl chloride. Roth[1] reports two cases observed by him, and concludes that "these cases of subacute to chronic intoxication are not explainable in any other way except on a supposition of a very slow removal of the poisons from the organism whereby apparently cumulative effect of individually insignificant amounts of poisonous materials results." Gerbis[2] reports two cases which came under his observation, and concludes that "the absorption by respiration of methyl chloride gas gives rise to specific disturbances of vision in workmen engaged in the handling of this substance, also in a prolonged intoxication manifesting itself as excitement and subsequent somnolence."

DESCRIPTION

In 1925, as consulting physician for a manufacturing plant engaged in the manufacture of refrigerators in which commercial methyl chloride was used as the refrigerant, my attention was called to a man seen leaving the plant apparently intoxicated. He was brought to an aid station for questioning. It was evident at once that the man was not drunk. He was fairly well oriented, and answered questions intelligently, but fell asleep frequently while being questioned. At times it was necessary to shake him vigorously to obtain a response. When asked how he happened to be in that state he replied, "It's that methyl we breathe." Further inquiry revealed that the man had been mildly intoxicated for several days and had gradually grown worse until his present condition was noticed. He stated that for ten days or more he had become more stupid and sleepy. It was difficult for him to remain awake long enough to eat his meals, and his wife had great difficulty in arousing him in the morning. The man was sent to the hospital for further observation.

An immediate investigation was begun which disclosed that there were other men in the plant who were mildly intoxicated. The men affected were all employed in the department where the refrigerator compressors were tested. After the compression coils were filled and tested, it was customary to release the gas into the air of the room, as provision had not been made for connecting the coils with an exhaust line. As the gas escaped it was frequently blown directly into the face of the worker, and in this way a fairly high concentration was maintained. It was considered very significant that symptoms of intoxication had not occurred in the plant during the summer months when all the windows and doors were open, and that the symptoms appeared with the onset of cold weather when the buildings were closed. It developed also that as this substance was heavier than air, the men testing nearest the floor were most affected. Steps were at once taken to provide sufficient ventilation, and men showing signs of intoxication were immediately hospitalized for further study.

RESULT OF FURTHER STUDY OF THE CASES

Owing to the fact that there were twenty-one cases in the series, it is not deemed advisable to attempt a detailed discussion of individual cases. The symptoms have been grouped in the order of the frequency of their occurrence.

Vertigo, staggering gait, and a feeling of buoyancy described as a sensation of "walking on air" were common to all. The gait of the entire group was characteristic. While it varied with the degree of intoxication, they all raised the feet much higher than was necessary, and combined with this there was staggering. They all complained of sleepiness, ranging from slight drowsiness to falling asleep at their work or while eating. All had more or less ptosis of the eye-lids. Anorexia was common in all cases. Eleven patients had slight nausea. Loss of weight of from 2 to 12 pounds (1 to 5.4 Kg.) was common to this group. Sixteen of the twenty-one patients complained of visual disturbances, which varied from slight blurring to diplopia, which was found in four of the sixteen cases. Dysphagia occurred in three cases. One man developed a persistent hiccup which lasted five days and resisted all forms of treatment, disappearing with the recession of the other symptoms. As the symptoms of intoxication diminished, a persistent insomnia occurred in fifteen cases, which necessitated the use of hypnotics. Five patients developed a fine tremor, which was particularly noticeable in the extremities.

It was found that eighteen of the twenty-one intoxicated men were voiding alkaline urine. In other respects the urine was apparently average. The ratio of blood cells was within normal limits. In the five most severe cases the spinal fluid was examined and found normal. Wassermann tests were reported negative. Blood sugar and blood nitrogen levels remained within normal limits, and the basal metabolic rate taken in the five most severe cases averaged slightly below normal.

After considering the relation to and the similarity of symptoms produced by this agent and those produced by methyl alcohol, it was decided to test the urine for formates, of which traces were found. Urine was examined from each man employed in the exposed department, and traces of formates were found in most of the specimens. Careful controls were run; the urine was sent to the laboratory numbered, specimens were taken at random throughout the plant and sent with those from the exposed department. These controls checked without exception. Formates were found in

1. Roth, O.: Schweitz Ztschr. f. Unfallkunde **17**: 169-179 (Aug.) 1923.
2. Gerbis, H.: München. med. Wchnschr. **61**: 879 (April 21) 1914.

exact proportion to the severity of the symptoms, from the faintest traces in workmen in the exposed department who were not showing symptoms, to appreciable amounts in those with active symptoms. The formates gradually decreased with a recession of the other symptoms.

The symptoms in all the cases subsided very slowly. In seven instances it was from fourteen to twenty-one days before the men returned to normal.

Only one patient showed any evidence of subsequent injury. This consisted of foot-drop, which has persisted without improvement for nine months. Recent examination of the eyes of the patients having eye symptoms did not reveal retrogressive change. It is the opinion of the ophthalmologist that the visual disturbances noted were due to temporary paralysis of the ciliary muscles.

TREATMENT

The treatment given these men consisted in immediate removal from contact with the gas, saturation with alkalis, and the relief of special symptoms.

CONCLUSIONS

Commercial methyl chloride with its probable impurities is absorbed by respiration in amounts sufficient to intoxicate workmen, unless special precautions are taken to guard against this danger.

It is a toxic agent that is very slowly removed from the body and therefore becomes cumulative in its action.

It can be detected in the urine as ammonium formate before symptoms of intoxication develop.

In this series of cases there was no injury to the optic nerve.

410 Old National Bank Building.

LEUKOCYTOSIS ACCOMPANYING FRACTURES

A STUDY OF TWO HUNDRED AND SIXTY CASES *

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MONTCLAIR, N. J.

My interest in this subject was aroused by the following incident: A working man who had fallen from a building was brought into the emergency ward of the Massachusetts General Hospital with a broken leg and a somewhat spastic abdomen. The possibility of a ruptured viscus was considered. The white count of 20,000 gave little information. Although far above normal, it was yet not high enough to be diagnostic of peritoneal irritation or of free blood in the abdominal cavity. The question then arose whether or not the leukocytosis might be due to the fracture. Nobody knew. A subsequent search of the literature did not reveal anything on the subject of an elevated white count in cases of fracture.

During the following year, therefore, I attempted to find out what effect a broken bone might produce on the number of white cells in the blood. For the purpose of investigation I employed cases of simple and of recent compound fractures as they passed through the emergency ward from day to day. Compound fractures of more than twenty-four hours' duration were not considered. It was thought that after this length of time infection might be present and influence the white count. If the patient was given ether, his white count was taken first. Only such cases were studied as did not present other obvious cause for leukocytosis. In all, 260 of these selected cases were observed: as many as time and opportunity would permit.

In table 1, the 260 cases are arranged according to bone involved or injury received, together with the average white cell count in each type of case. Skull

TABLE 1.—*White Cell Count in Fracture Cases*

Bone Broken, or Type of Fracture	Number of Cases	Average White Cell Count
Skull	12	17,700
Multiple fracture	19	14,760
Radius and ulna	24	14,730
Femur (shaft)	22	13,470
Radius	10	13,420
Tibia	12	13,310
Os calcis	4	13,210
Femur (neck)	11	13,200
Humerus	36	13,150
Potts' fracture	8	12,440
Ulna	4	12,330
Ribs	4	11,970
Pelvis	2	11,900
Colles' fracture	21	11,860
Spine	5	11,600
Tibia and fibula	18	11,580
Fracture into joint	6	11,280
Mandible	4	10,700
Scapula	1	10,700
"Impacted" fracture	6	10,560
Clavicle	7	10,440
Fibula	7	10,100
Patella	6	10,000
Phalanges, metacarpals and metatarsals	11	9,650
Totals	260	Average, 12,255

fractures head the list, with an average leukocytosis of 17,700. Next come multiple fractures; then the larger of the long bones, and, last of all, the phalanges, metacarpals and metatarsals, which give a mean white cell count of 9,650. It is evident, therefore, that the rise in number of white cells varied roughly with the extent of the injury.

TIME OF APPEARANCE OF LEUKOCYTOSIS

Experience showed that leukocytosis developed immediately following injury, reached a maximum within twenty-four hours, and maintained approximately the same level until after immobilization of the fragments. Although hourly observations were not made to determine transient fluctuations in white count, all evidence went to prove that such changes were not great. Counts made on patients seen during the first twenty-four hours following injury usually equaled or slightly exceeded counts made on a like group of patients seen later than the first day.

EFFECT OF REDUCTION AND IMMOBILIZATION

The effect of reducing the fracture and immobilizing the limb is illustrated in the accompanying chart. Following reduction and immobilization, daily white counts were taken on ten ward patients for ten consecutive days. This chart shows the rapid drop in total number of white cells, accompanied by a corresponding fall in the number of polymorphonuclear leukocytes. It should be observed that the number of leukocytes reached 6,500 on the fifth day. The condition of these properly treated patients may be contrasted with that found in fourteen other cases in which the patients entered the hospital from five to thirty-five days following injury and in which an attempt at splinting had not been carried out. Only three of the latter patients presented normal white counts (6,800, 7,000 and 7,600,

* From the surgical service of the Massachusetts General Hospital, Boston.

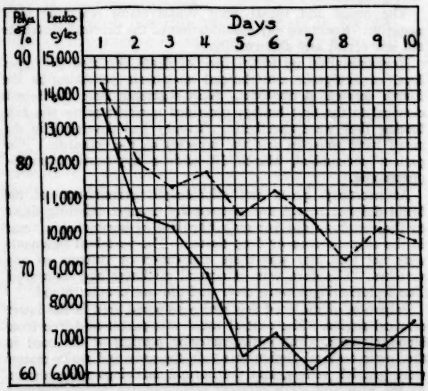
respectively). The other eleven showed an average count of 11,300. The first two of these patients with normal white counts were old and feeble, with low vitality. The third was a man, aged 21, who had broken the proximal phalanx of his left fourth finger seven days before.

INFLUENCE OF AGE ON WHITE CELL COUNT

The age of a patient was frequently found to influence his reaction to injury. For a group of fifty patients 10 years old, or under, the white count averaged 15,120. In a second group of forty-eight whose ages were 60 years or over, the average count was 11,710. Among the fifty children, only three presented white counts as low as 8,000. Among the forty-eight adults, on the other hand, there were nine with white counts below 8,000.

DIFFERENTIAL COUNT

One may also compare with interest the differential count in children and adults. In a group of twenty children under 10 years of age the average white count was 15,800, and the polymorphonuclear cells were 80 per cent. For a similar number of adults of 20 years or over, the average total white cells was 13,300 per cubic millimeter, with 85.4 per cent polymorphonuclear cells. These observations are consistent, however, with the well known fact that children often show a larger percentage of mononuclear cells than do adults.



Average leukocyte count for first ten days in ten cases of fracture in which proper reduction and immobilization were secured: solid line, total leukocytes; broken line, percentage of polymorphonuclear cells.

FACTORS INFLUENCING INCREASE IN WHITE CELLS

Because of injury to bone marrow in these cases, the question arose whether or not this fact might account for the leukocytosis. The white cell reaction is chiefly polymorphonuclear in type—as a glance at the chart will show. But this leukocytosis is not apparently brought about by injury to hematopoietic tissue, as is the red bone marrow. Injuries to flat or irregular bones give, on the whole, a lower white cell count than do injuries to the shafts of long bones—in which red bone marrow is not normally found (table 1). Fractures of the skull afford an exception to this rule. The high leukocytosis in these cases, however, is probably due to some other cause than injury to hematopoietic tissue.

Whatever may be the ultimate cause of this elevated white cell count, it is clearly influenced by three separate conditions: injury to bone and periosteum; injury to soft tissue, and displacement of fragments. The relative importance of these three factors is clearly demonstrated in table 2. In column 1 is shown the simple injury to bone and periosteum with little if any

TABLE 2.—*Relative Effects Produced on the White Cell Count by Injury to Soft Tissues and by Displacement of Bone Fragments**

1	2	3	4
Slight Injury to Soft Tissue and Slight Displacement of Fragments	Marked or Moderate Injury to Soft Tissue and Slight Displacement of Fragments†	Slight Injury to Soft Tissue and Marked or Moderate Displacement of Fragments	Marked or Moderate Injury to Soft Tissue and Marked or Moderate Displacement of Fragments
9,400	16,400	18,600	16,500
9,600	16,300	12,700	12,500
17,900	10,700	10,800	9,100
9,800	16,800	13,400	12,000
11,200	10,400	9,000	10,600
10,900	13,600	11,900	14,700
9,900	10,000	18,000	9,800
11,600	11,500	16,800	14,000
8,000	6,700	11,400	13,800
10,400	11,700	12,800	10,700
9,500	9,200	13,800	12,000
12,300	17,000	8,300	9,600
17,500	9,200	12,800	16,000
15,000		13,100	13,100
9,100		12,400	9,100
8,800		15,800	11,700
9,800		7,600	12,000
9,800		9,600	19,500
8,600		9,200	8,800
15,600		8,100	24,200
13,500		9,100	17,100
11,000		16,900	11,000
11,400		17,500	12,300
9,500		19,000	16,800
12,000		12,000	15,300
Averages, 11,284	12,270	12,400	13,284

* Numbers represent white cell counts.
† Only thirteen cases of this type in the series of 260.

involvement of soft parts or displacement of fragments. The average white count for twenty-five such cases is 11,284. Column 2 shows the effect of marked or moderate injury to soft tissue—indicated by such signs as edema, ecchymosis, laceration or contusion. This factor of soft tissue injury adds 1,000 to the white cell count, which here averages 12,270, as against 11,284 in the preceding cases. Column 3 gives the results of marked or moderate displacement of fragments. This condition likewise increases the white count by 1,000: the average here is 12,400. Finally, in column 4, one sees the product of these two factors: marked or moderate injury to soft parts and marked or moderate displacement of fragments. These patients developed a mean white count exactly 2,000 higher than did those in column 1. Judging from the observations made in columns 2 and 3, this result is precisely what would be expected.

CONCLUSIONS

From the clinical observations here considered, one may feel reasonably safe in drawing the following conclusions:

1. Traumatic injury to bone gives rise to a moderate leukocytosis, chiefly polymorphonuclear in type.

2. This elevation in the white cell count reaches a maximum within twenty-four hours following injury. It remains approximately at this level until immobilization of fragments is secured.

3. Proper reduction of fracture and immobilization of fragments are followed by a rapid fall in the white

cell count, which then reaches normal by the fifth or sixth day.

4. Old, debilitated persons usually develop less leukocytic reaction in case of fracture than do children or younger adults.

5. This increase in number of white cells appears to be largely the result of injury to the bone and periosteum but varies also in proportion to the amount of soft tissue injury and displacement of fragments.

48 North Fullerton Avenue.

SPRAIN OF CERVICAL SPINE CAUSING THROMBOSIS OF ANTERIOR SPINAL ARTERY *

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AND
CHESTER C. GUY, M.D.
CHICAGO

Trauma or excessive muscular activity may produce dislocation, fracture or fracture dislocation of a vertebra. Distortion of the vertebral column may also occur momentarily, the vertebrae quickly returning into normal alinement. According to Oppenheim,[1] in the very short period of temporary vertebral displacement, contusion, compression or tearing of the cord may take place.

Frazier [2] states that the mechanism of such vertebral "sprains" is an overstretching or laceration of the spinal ligaments, and according to the extent of ligamentous injury there may be more or less transitory disarrangement of the normal relationship of one vertebral body to the other. Only when the bodies do not return to their original relationship is the lesion converted into a true dislocation. In cases of localized cord injury without evidence of fracture or dislocation, the assumption is that the cord has been subjected to pressure by a temporary luxation.

Frazier gives, as the clinical manifestations of vertebral sprain, voluntary restriction of motion, pain on active or passive motion, tenderness on pressure over the vertebra, absence of evidence of fracture or dislocation, and symptoms of a cord lesion.

The following case with necropsy is an example of vertebral sprain, due to excessive muscular exertion, which produced thrombosis of a portion of the anterior spinal artery in the cervical region, followed by secondary myelomalacia:

REPORT OF CASE

A white boy, aged 15 years, who entered the Cook County Hospital, Feb. 17, 1926, had always been in excellent health except for a slight rhinitis a few weeks prior. February 11, he awakened feeling tired, whereupon he yawned and vigorously stretched his arms upward, outward and then backward. Suddenly a sharp sticking pain shot into the lower part of his neck, accompanied by an audible crack. The pain was momentary, but was followed by a dull aching soreness. Soreness and stiffness in his neck compelled him to carry his head tilted forward when he walked to school. Attempting to play ball, he noted weakness in both arms, and movements of the left arm caused severe pain in his neck. He dropped his cap and recovered it only with great difficulty. Entering the schoolhouse, he found his upper extremities powerless. He lay down, and in twenty minutes both legs were completely paralyzed. Hot bags applied to his body resulted in deep flesh burns without sensation of heat or pain.

On admission, the boy was well nourished and had moderate restriction of cervical flexion. There was tenderness on palpation of the fifth cervical spine, and the intervertebral space between the fifth and sixth cervical vertebrae seemed decreased. Bruises or signs of external injury were absent. Severe second degree burns were present on the skin of the chest, abdomen and legs. The cranial nerves were normal.

Motion of the fingers was impossible and movements of the wrists were weakened. Flexion of the forearms was feeble, and extension more so. Pronation and supination were impossible, and all movements about the shoulder joint were weakened. The intercostals did not function. The abdominal muscles moved well on respiration, but could not be contracted voluntarily. The intrinsic hand muscles and those of the forearms and arms were flabby. Both legs were completely flaccid and paralyzed.

Sensation was normal above the second cervical dermatome. The second to the fourth cervical segments were hyperesthetic. Below the fourth cervical there was complete analgesia and thermal anesthesia. Light touch was preserved from the fourth cervical to the first lumbar skin segments. Below the first lumbar there was complete anesthesia save for a small area on the medial and lateral surfaces of the right ankle and the toes of the left foot. The penis and scrotum were anesthetic. Deep sensation was preserved only in the soles of both feet.

The biceps and triceps responded slightly to stimulation. All other deep and superficial reflexes were absent. There was complete incontinence of urine and feces, and intermittent priapism was noted.

The blood and spinal fluid Wassermann reactions were negative. Roentgen-ray examination of the cervical vertebrae did not reveal any abnormality.

Reexamination up to the time of death revealed the upper level of analgesia and thermal anesthesia persisting at the fourth cervical dermatome. Skin segments from the fourth cervical to the first lumbar remained normal; below the first lumbar they were anesthetic. Atrophy had developed in the small hand muscles and the muscles of the forearms. The patient succumbed, March 19, with a hypostatic bronchopneumonia.

At necropsy, gross and microscopic examination of the brain did not reveal any noteworthy change. Cutting down to the vertebrae did not reveal bruised or hemorrhagic areas in the subcutaneous or deep tissues. The vertebral ligaments were not torn, nor was there dislocation or fracture of any vertebra. The dura was of normal thickness and uninjured. The leptomeninges were clear and did not contain blood.

Palpation of the cord revealed a softened area in the lower cervical region. The central canal was patent and free from blood pigment. The entire anterior portion of the cord in the lower cervical region was soft, the gray and white matter were grayish yellow, and the normal markings were absent. At the fifth and sixth cervical vertebrae, the yellow necrotic area involved the entire anterior half of the cord, the central gray substance, and the medial part of the posterior columns.

Microscopic examination revealed the pia arachnoid only slightly thickened and free from blood pigment. In the anterior median fissure of the fifth and sixth cervical cord segments, the anterior spinal artery was occluded by a thrombus. This thrombus was hyalinized and partially contracted. It could be followed in the vessel as it passed through the anterior median fissure into the central gray matter. The central branches were thrombosed also, and the entire vessel was thickened by collagenous connective tissue in the adventitial layer.

At the fifth cervical segment, the entire anterior portion of the cord consisted of softened nervous tissue without normal structural markings, and was composed of a mass of gitter cells containing neutral fat and fatty acids, staining bright red with scarlet red. The gitter cells were large and rounded, and contained only large lipoid globules within their meshes. They were found in the intra-adventitial spaces of the vessels,

* From the Snydacker Fund of the Michael Reese Hospital and the Nelson Morris Memorial Institute for Medical Research, and the Pathological Laboratory of the Cook County Hospital.

1. Oppenheim, H.: Lehrbuch der Nervenkrankheiten, ed. 7: Berlin, S. Karger, 1923.

2. Frazier, C. H.: Surgery of the Spine and Spinal Cord, New York, D. Appleton & Co., 1918.

extending along these into the anterior portion of the subarachnoid space.

Above the fourth cervical segment the softening was limited to the central gray matter, but extending posteriorly it involved the bases of the most median part of the columns of Goll. Differential glia and connective tissue stains did not reveal scar formation. With Marchi's method, the softened area of the posterior columns showed large black globules. These were present in this region in each cord segment, but only a few scattered globules were found in the anterior tracts at any level. Myelin sheath stains of many cord segments revealed a normal appearance, except in the posterior columns, where the myelin sheaths were almost completely degenerated.

Examination of the rest of the body revealed a diffuse suppurative bronchopneumonia as the terminal cause of death, but other noteworthy pathologic conditions were not observed.

COMMENT

The essential pathologic change was thrombosis of the anterior spinal artery at the fifth cervical segment with secondary softening of that portion of the cervical spinal cord supplied by it. The anterior spinal arteries arise from the vertebral arteries just caudal to the formation of the basilar artery. They descend down the cord, uniting to form a single trunk running in the anterior median fissure as far as the lower cervical segments. In the cervical region the vessel penetrates the median sulcus, pierces the anterior commissure, and gives off lateral branches supplying the anterior and central gray matter. The peripheral extent of the area supplied is probably variable.

The softening in our case was definitely in the distribution of the anterior spinal artery, but also extended farther anteriorly to involve the anterior and anterolateral white matter and part of the posterior columns.

A systemic etiology for the thrombosis could not be discovered. The vessels were healthy, and sources of embolism were not found. Syphilis was not manifested. The symptoms came on shortly after vigorous muscular movements of stretching and were accompanied by marked pain, tenderness, and limitation of motion of the cervical vertebrae. However, roentgen-ray examination and necropsy did not show fracture or dislocation.

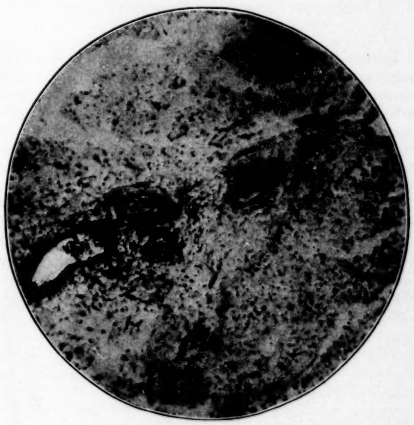
We believe, therefore, that there occurred a temporary luxation of the fifth cervical vertebra which very quickly returned to normal. Severe injury to the cord itself did not result, since signs of pressure or hemorrhage were not present. The temporary luxation probably compressed the superficially placed anterior spinal artery sufficiently to produce a thrombus from stasis following injury to the vessel wall.

Frazier states that sprains as well as vertebral dislocations are of more frequent occurrence in the cervical region because of the greater mobility of this portion of the spine. As a result of such sprains or luxations the cord may not be primarily injured.

The neurologic symptoms are of interest, since they resembled the syndrome of lesions about the central canal with accompanying sensory dissociation. Such a syndrome associated with trauma would ordinarily be ascribed, as it was in this case, to hemorrhage into the central canal.

The pyramidal and the spinothalamic tracts were completely degenerated, thus giving rise to complete paralysis and loss of pain and temperature sense below the fourth cervical dermatome. Touch was absent only below the level of the first lumbar segment, and correspondingly the posterior columns were degenerated only in their medial portions. This medial area is the upward projection of sensory fibers from the lower portion of the body, the fibers from the upper portion assuming a lateral position. Atrophy was noted only in the muscles of the forearm, arm and fingers, corresponding to the extent of involvement of the anterior horns. The intermittent priapism which was observed is often present in cervical cord lesions.

Thrombosis of a small portion of one spinal vessel is very infrequent. Careful search through the literature revealed only one similar case. Spiller [3] reported a case of thrombosis of the anterior spinal artery in the lower cervical region with softening. The onset was preceded by severe muscular exertion followed by weakness in the arms and pains between the shoulder blades. Spiller attributed the thrombosis to syphilitic vascular disease, based only on the history of a "spinal meningitis" four years previously, and vascular thickening limited to the anterior portion of the cervical cord, the



Section of spinal cord: Three central branches of the anterior spinal artery are thrombosed and surrounded by softened cord tissue composed entirely of gitter cells; van Gieson stain; slightly reduced from a photomicrograph with a magnification of 130 diameters.

softened area. Such thickening may well have been secondary to the cord softening.

Syndromes of lesions of the central gray matter with characteristic sensory dissociation are not infrequent following slight trauma or muscular exertion. Such accidents are more common in young adolescents, and it is believed by Oppenheim that the blood vessels are more fragile at this age or that these patients are bleeders, either condition giving rise to hemorrhage.

We believe that thrombosis of the anterior spinal artery may give rise to the same syndrome as central hemorrhage and is of greater frequency than is suspected. Furthermore, we wish to point out that following muscular exertion or mild trauma, evidences of a local cord lesion without fracture or dislocation should be attributed to "spinal sprain" or temporary self-reduced luxations.

3. Spiller, W. G.: Thrombosis of the Cervical Anterior Median Spinal Artery; Syphilitic Acute Anterior Poliomyelitis, J. Nerv. & Ment. Dis. 36: 601, 1909.

SUMMARY

In a case of "spinal sprain" in the region of the fifth cervical vertebra with resulting thrombosis of a portion of the anterior spinal artery, the subsequent cord softening affected the central and anterior gray matter, extending peripherally to involve completely the crossed pyramidal and spinothalamic tracts and the bases of the medial portion of the posterior columns.

After mild trauma or muscular exertion, evidence of cord lesion without fracture or dislocation may be due to temporary vertebral luxation.

25 East Washington Street.

ORAL LESIONS DUE TO VINCENT'S ANGINA

WHAT EVERY PHYSICIAN AND DENTIST SHOULD KNOW ABOUT ITS RECOGNITION AND TREATMENT

JOSEPH COLT BLOODGOOD, M.D.
BALTIMORE

Before trench warfare in France, in 1914, Vincent's angina was well recorded in the literature as a form of sore mouth. The organisms that cause the oral infection had been described, but a specific therapeutic agent had not been discovered. Apparently, it was a rare disease. Very few members of the medical profession and even fewer members of the dental profession were familiar with it.

In France, during the war, trench mouth was more common than were typhoid and malaria during the Spanish war, and the dentists in the medical corps of the army very quickly recognized it. In addition, they soon found that sodium perborate was a specific. Many other chemotherapeutic agents were employed, including the aniline dyes and some forms of arsphenamine intravenously.

When Dr. Norval H. MacDonald, a member of the dental corps of the army, returned from France, in 1919, he gave me a clear description of the disease from his very large experience and also informed me of the specific action of sodium perborate.

In an article published in 1921, I [1] did not mention Vincent's angina, but gradually since that time this lesion of the oral cavity has become almost as common as leukoplakia. Today, I would not have any difficulty in presenting at my weekly clinic one or more examples of sore mouth in which the cover slip examination revealed the organism of this disease predominating, and I would be able to present the same patients almost completely well at the next clinic, or within two weeks.

There are two reasons why, in a surgical clinic, Vincent's angina is becoming a more and more common occurrence. In the first place, in my own clinic, since 1921, benign lesions of the mouth have increased from 50 to 75 per cent. Up to 1900, less than 3 per cent of the lesions of the mouth seen in the Johns Hopkins clinics were not malignant. The change since then is due to the education of the public, which began locally in Baltimore, in 1902, when the danger of the benign pigmented mole was first pointed out, and became national in 1913, when the American Society for the Control of Cancer was organized.

1. Bloodgood, J. C.: Cancer of the Tongue: A Preventable Disease, J. A. M. A. 77:1381 (Oct. 29) 1921.

I am convinced, however, that Vincent's angina is on the increase, just as all oral and respiratory infections are becoming more common. This increase is associated, or coincident, with overcrowding, overheating in winter, the closed automobile, and the increasing number of large audiences in small, badly ventilated rooms or halls.

There may be a third factor for the large number of cases of Vincent's angina in my clinic. I have been writing about it constantly and never fail to mention it in any lecture; consequently it has taken a very prominent place among the lesions of the oral cavity about which I instruct the third and fourth year students.

The condition that is called Vincent's angina presents a very varying appearance of the mucous membrane of the gums about the teeth, of the lips, cheek and floor of the mouth, and of the tonsillar area and pharynx. The mucous membrane lining the three communicating chambers—oral cavity, fauces and pharynx—may be diffusely involved or there may be only a single spot of a few millimeters in diameter. The single spot is the unit, and the diffuse lesion is only a multiplicity of single spots. The single spot is at first a red area of irregular outline, never sharply defined, of such a peculiar redness that it might be called the erysipelas

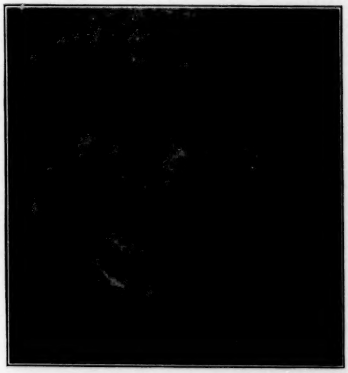


Fig. 1.—Patches on the tongue due to Vincent's angina. The white reflections on the tongue and lip are high lights.

of the mouth. The center of the red area may be covered with a whitish or grayish patch which is really due to the superficial destruction or necrosis of the red mucous membrane. Beyond this superficial slough there is still a red zone. It is not unlike a minute gumma in which a central zone of necrosis, surrounded by the red zone of collateral anastomoses of increased vascularity, is recognized. In this stage, because of the little gray or whitish slough, the condition may be confused with leukoplakia, but the latter is never surrounded by an inflamed and reddened mucous membrane. Leukoplakia and Vincent's angina may appear together. In the next stage the slough comes away and leaves an ulcer. Thus there may be, in this infection called Vincent's angina, single or multiple red areas, single or multiple areas covered with a superficial slough, or single or multiple ulcers. Now and then one or more of the ulcers may be quite large, although rarely more

than 18 mm. in diameter; usually the single unit areas are only a few millimeters in diameter. The ulcer never looks like a mucous patch, and it never has the ragged excavated edge of the tuberculous ulcer or the induration of the cancerous ulcer. In the very extensive cases, there may be a fibrous exudate not unlike diphtheritic inflammation.

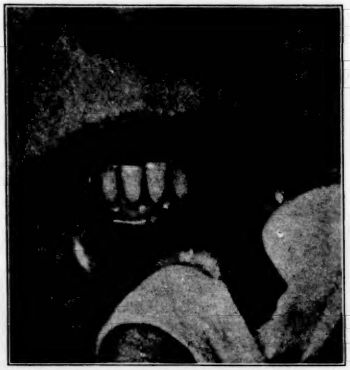


Fig. 2.—Areas of Vincent's angina on the gum about the first left canine and bicuspid. The white reflections are high lights.

The diphtheritic type as a rule can be distinguished clinically from diphtheria by the fact that, regardless of how diffuse the involvement or how extensive the ulceration and fibrous exudate, the patient does not exhibit toxic symptoms.

It is very important for every physician and dentist to know that I have never found the organisms of Vincent's angina in a mouth from which all the teeth have been extracted. Apparently the organism can exist only in the crevices about the teeth, and as a rule one does not often see Vincent's angina when the teeth are clean and smooth, when only the enamel is exposed, when the gums have not receded, and when pyorrhea is absent.

On the other hand, it must also be remembered that when one makes routine examinations of mouths, the organisms will frequently be found without any evidence of their presence in a visible reaction of the mucous membrane. Another very important observation is that the finding of Vincent's angina in the cover slips does not necessarily mean that the lesion is entirely due to this type of infection. Whenever there is a benign or malignant lesion of the mucous membrane leading to an ulcer, Vincent's angina may be a secondary invader. In such cases sodium perborate will clear the oral cavity of the organism, but will not heal the ulcer, which may be traumatic, syphilitic, tuberculous or cancerous. But for all those lesions which I have described that are entirely due to this infection, sodium perborate properly employed will accomplish a cure—and a rapid cure—in more than 95 per cent of the cases. In 4 or 5 per cent of the cases in which the lesions cannot be distinguished from the single or multiple local area of Vincent's angina, in which the organism predominates in the cover slip, and for which sodium perborate does not accomplish a prompt cure, I have found another factor which is not local, such as a tuberculous, syphilitic or cancerous condition, or traumatic, like that caused by the pressure of a plate, or the irritation of a bridge or a tooth, but general. The sore mouth, perhaps with bleeding gums, is due to some general disease, especially one dependent on faulty food or the absence of some specific vitamin, for example, scurvy or pellagra. Now and then there has been only an achylia to explain it in a few instances, diabetes, and occasionally symptoms of hypothyroidism.

Unquestionably a part of the routine examination of the oral cavity should be a cover slip smear properly stained and studied under the microscope. At the present time this is difficult to do in every dentist's office. I know a number of dentists who are very proficient in this microscopic diagnosis—it is not hard to learn. Intraneural anesthesia is really much more difficult and many dentists are now taking their own roentgenograms of teeth. But the cover slips can be made and sent to any laboratory.

I am quite confident that all dentists can adhere to the following practice. In the first place, even when a sore mouth is not evident, it would be a good plan, before and after any dental work is done, or before and after cleaning the teeth, to give a treatment with the sodium perborate. If there is any evidence of a sore mouth, this treatment should be continued daily by the dentist and, if at the end of one week the condition is not relieved, there should be a consultation to find out the exact cause and nature of the oral lesion.

TREATMENT WITH SODIUM PERBORATE

A thick paste of the chemically pure salt should be made with water and spread over all the teeth with the clean fingers. If there are any red or ulcerated areas

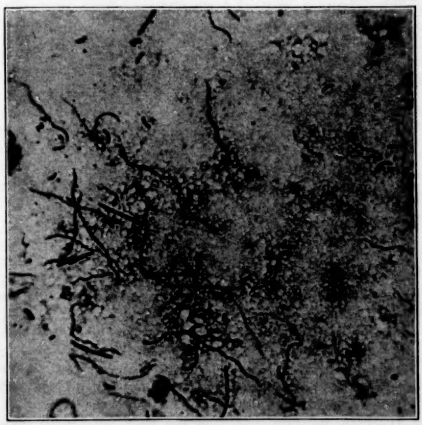


Fig. 3.—Typical spirillum organisms of trench mouth; oil-immersion photomicrograph of a cover slip taken from a patch on the tongue shown in figure 1.

in spots not around the teeth, they should be treated in the same way. The patient holds this paste in the mouth for about five minutes. During this time it foams as a result of oxidation. Then the mouth should be rinsed with warm water. It is a mistake for the patients to do this themselves until they are thoroughly trained, and as a rule, by the time they are trained the

lesion is cured. If the treatment is too frequent it produces an irritation.

When the entire oral cavity is involved, with extension to the fauces and pharynx, there must be, in addition, a gargling with a thinner solution two or three times a day. The more extensive the lesion and the

Fig. 4.—Leukoplakia on the base of the tongue. Cracking, scaling, warts or ulcers were absent, and cultures were negative for Vincent's angina.

more ulcerated the areas, the longer before the expected cure.

I have seen and treated every type, and the recovery is as definite as that of a specific syphilitic lesion after intravenous therapy. In the early cases it was as though some miracle was happening.

In Egypt, in 1924, Dr. Bret Day told me that trench mouth was very common, and that he got excellent results with methylene blue. In the medical department of Yale University, experiments with mercurochrome have proved successful. Dr. MacDonald told me that in his hospital experience in France with hundreds of cases everything was tried locally with and without arsphenamine intravenously, and from this experience the treatment with sodium perborate won out. Of course, they did not then have mercurochrome.

Many of the patients who have come under my observation, especially those with extensive and diffuse lesions, gave a history of local treatment with virtually every possible drug except sodium perborate, with the sore mouth still persisting for weeks and often months. Yet, the reaction to sodium perborate has been so immediate that there does not seem to be any question as to its specific action. In addition, the organisms have disappeared from the mouth, as shown by repeated cover slip examinations.

It is my opinion that it would be a very good plan for every dentist to have sodium perborate in his office and to familiarize himself with its proper application. I am confident that this treatment would be a good routine oral cleanser preliminary to any dental operation, including cleaning of the teeth. It is just as reasonable to cleanse the oral cavity as a preoperative precaution as to cleanse the skin or wash the hands. The increasing occurrence of trench mouth, colds and influenza during the winter months suggests that it might be a good plan for dentists to wear gloves, because it is impossible for them to keep their hands so clean that the danger of carrying one of these infections from patient to patient or to themselves will be eliminated. A number of persons in my office clinic have become infected with trench mouth in spite of the utmost vigilance in washing the hands before and after examining mouths. Many of us are cleansing our mouths with sodium perborate three times a week. This precaution has so far been effectual.

BENIGN LESIONS OF THE MOUTH OTHER THAN VINCENT'S ANGINA

My object here is to describe Vincent's angina as I have seen and recorded it, and the treatment that has apparently given the best results. However, the paper would be incomplete without a very brief mention of other lesions of the mouth which are becoming very common, because the informed public now does not wait for cancer. There are two types of benign lesions of the mouth: those which are distinctly precancerous, and those that are not. Vincent's angina belongs to the latter. As far as I know, it is not a factor in the production of cancer. The factors that we know are involved in the causation of cancer are ragged, dirty teeth and tobacco. For this reason, when there is a lesion of the mouth, regardless of its character, the teeth must always be cleaned and smoothed, and temporarily it is wiser to discontinue tobacco in all forms. Leukoplakia, or white patches in the mouth, is caused by tobacco and tobacco only, and there is only one treatment for this: to discontinue tobacco until every sign of the white patch is gone. Then, with scrupulously clean teeth and with moderation, the patients, if

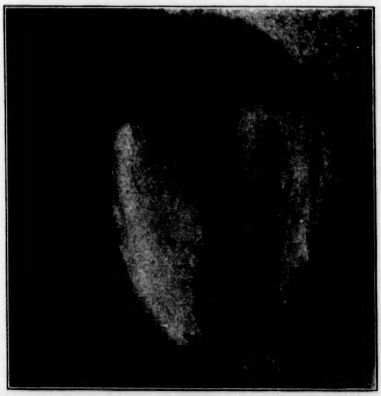


Fig. 5.—Geographic tongue: a smooth patch in the middle toward the base of the tongue; just behind it a hypertrophied papilla; etiologic factors were not found, and the condition has not changed since this photograph was taken in October, 1924.

they wish, may enjoy smoking again under careful observation.

Fibromas are lesions of traumatic origin not having any relation to tobacco or Vincent's angina. They resemble the tendon sheath tumors. If these fibromas are situated in cancer areas, for example, the edge of the tongue, it is best to excise them, always giving them a good margin. When situated on the dorsum of the tongue, well within the margin, they may be left alone.

Areas of irritation are very common in both men and women. They may be situated anywhere. They are most common on the tongue and, regardless of where situated, are usually in a spot that comes in contact with the teeth, and the tooth is always sharp or ragged. In addition to the trauma by the tooth, there may be Vincent's angina organisms, or tobacco, or achylia, or an infected tonsil or sinuses. These spots of irritation, of which the patient is aware because he feels pain or tenderness, may show nothing on inspection, or there may be a little red area. The treatment of these areas of irritation is to find and remove the cause. When they are due to tobacco and ragged teeth, and these are not removed, the area of irritation becomes an ulcer or a wart, and then the ulcer or wart becomes a cancer.

Hypertrophy of the papillae at the base of the tongue is becoming a more and come common observation in the surgical clinic. This is due to the fact that publicity has introduced a fear before cancer has developed, and both physician and dentist are not familiar with the appearance of the normal papillae of the tongue, or that many causes may produce hypertrophy and redness associated with pain and tenderness. The treatment is the same as for an area of irritation: the cause should be removed. The most urgent causes are tobacco and dirty, ragged teeth. It is a great mistake to cut out or snip off these hypertrophied papillae before removing the causes. If a piece is to be removed for diagnosis it should be done by a surgeon not only capable of making the diagnosis but able immediately to treat the lesion if it is found to be malignant.

Ulcer of itself is always suggestive of a malignant growth, especially if tobacco and ragged, dirty teeth are predisposing factors; but ulcers may be syphilitic, tuberculous, due to Vincent's angina, or purely traumatic, from the pressure of a plate or the irritation of a tooth. It is a mistake to start treating ulcers with caustics or radium or roentgen ray. The possible causes, tobacco and ragged, dirty teeth, should be removed. If Vincent's angina organisms are present in the cover slips, there should be immediate improvement after a few applications of sodium perborate. The same would be true if the Wassermann reaction is found positive and the ulcer syphilitic after intravenous therapy. In tuberculous ulcer I have never failed to find tuberculosis of the lungs. In the ulcer due to the pressure of a plate or the injury by a tooth, there should be immediate relief on removing the cause. My experience with ulcer clearly shows that there has been too much local treatment with irritants, rather than a rapid, scientific, sensible removal of causes and observation of the effect. If an ulcer does not heal after this, it should be looked on as malignant. When the complete excision can be performed without mutilation, then it should be done with the cautery, in such a way that nothing more need be done if the microscopic examination reveals cancer. If the ulcer is larger, a piece may be excised for frozen section diagnosis, to be followed at once by the radical operation with the cautery when the section shows a malignant condition. Tuberculosis may produce a large ulcer even with the induration of cancer.

Geographic tongue is a very typical and striking lesion of the tongue, usually in a single area, now and then in two. The area is a spot on the tongue in which the papillae are smaller. It is like a bald spot on the scalp. The cause of the geographic tongue is not known; it never develops into cancer, and it does not seem to have any relation to tobacco and dirty, ragged teeth, Vincent's angina, syphilis or tuberculosis. I have never known this lesion to disappear.

Other lesions of the mouth that are not malignant are too rare for mention in this short paper, but the lesions that I have briefly outlined are really very common, and it is surprising how little attention has been given them by the dental and medical profession. The vision of the specialist in nose and throat diseases begins at the anterior pillar of the fauces, and that of the dentist rarely goes beyond the teeth, except in the roentgenogram. Both of these types of specialists are sufficiently trained to grasp quickly these benign lesions of the mouth, and therefore to be of great assistance in eradicating cancer of the oral cavity.

904 North Charles Street.

Clinical Notes, Suggestions and New Instruments

KOPROSCOPE: A SPECIAL CONTAINER FOR FECES

MOSES EINHORN, M.D., NEW YORK

The rapidly increasing practice of examining feces in gastro-intestinal work has created the need for some sort of device that will enable the patient, the physician and the laboratory technician to handle the specimen with a minimum of discomfort. The difficulties experienced by patients either in collecting the specimen or in obtaining a suitable container for holding it have resulted in their employing for this purpose various used spoons, jars and glasses that are inconvenient from the laboratory standpoint and do not give assurance, especially in regard to the examination for blood, that the specimen has not been affected by extraneous factors.

Koproscope.

The collection of feces in such a manner also results in many inconveniences for the physician and the laboratory technician. The necessity of handling these containers with smeared and dirty covers is very unsatisfactory from the hygienic standpoint. The fact that the covers of such jars are loose and not air tight causes the laboratory to be filled with obnoxious odors. In many cases, when the container is not transparent, the examiner cannot make a macroscopic examination without subjecting himself to the unpleasant odors. Since these specimens cannot be kept without causing odors, an immediate examination is always necessary.

The koproscope shown in the accompanying illustration consists of a 4 ounce glass jar with a special metal screw cap. On the top of the metallic cap a knob is attached which permits the screwing and unscrewing of the cap without touching it. From the middle of the inner side of the cap there projects a rod which ends in a scoop a short distance from the bottom of the jar. Both knob and rod are firmly attached to the cap and are immovable.

The superiority of the koproscope over the old method of collecting feces is readily observed in the following advantages which it possesses:

1. It makes it easier to collect and store the specimen, since both a scoop and a standard jar are provided for this purpose.

2. Both patient and physician find it easier to handle because of the knob attached to the cap, which permits screwing and unscrewing without the necessity of handling the cap, which may have been dirtied by the specimen.

3. The cap is liquid tight and air tight, and thus prevents leakage and the escape of obnoxious odors.

4. The fact that the jar is transparent enables the examiner to make a macroscopic examination without subjecting himself to the unpleasant odors.

5. Since the jar prevents the escape of obnoxious odors, it is possible to keep the specimen in the laboratory for some time.

6. As the jar is a new one, one can be certain that outside factors have not had any influence on the clinical tests, especially the one for blood.

286 West Eighty-Sixth Street.

AN UNUSUAL CASE OF LIPOMA OF THE PECTORAL REGION SIMULATING GYNECOMASTIA

RICHARD JOSEPH WHITE, M.D., FORT WORTH, TEXAS

Lipomas are common tumors and are rarely of special interest, but the location and contour of the one here reported were very unusual.

J. H. H., a man, aged 64, a carpenter, was seen at the City and County Hospital, where Dr. R. S. Mallard had done a successful perineal prostatectomy on him. I was so interested by the unique tumor illustrated that I persuaded him to have it removed. He stated that he first recalled a slight swelling in the region of the left nipple about forty years ago. It had grown very slowly and intermittently until it had gained its present size about fifteen years ago, since which time, except for a slight mechanical inconvenience in his work and difficulty in getting his clothes to fit, it has not caused him any trouble. Years ago a physician had told him that it might turn into cancer, but this had not impressed him much. Aside from his recent urinary difficulties he had always been well.

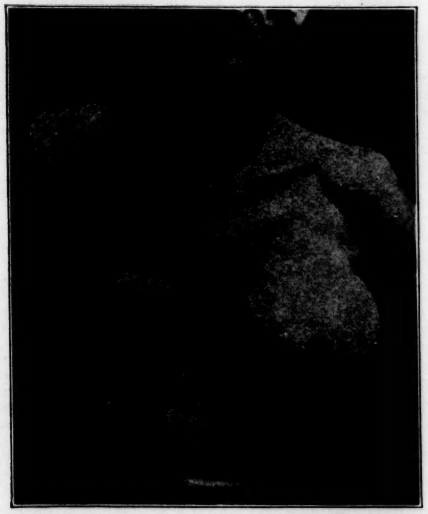


Fig. 1.—Appearance of tumor from front.

The accompanying illustrations show the size, location and shape of the tumor. As can be seen, the contour was not that of the normal female breast, but at first glance the resemblance was striking and the effect ludicrous. The nipple and areola do not show but were present on the under surface of the tumor and apparently were not connected with it. The skin everywhere moved freely over the tumor and the tumor on the deeper tissues but when the pectoral muscle was tensed the tumor rose up, stood forward and became less movable, suggesting an attachment to the pectoral fascia. The tumor for the most part was firm and slightly elastic and was thought to be fibroma; in other parts it was softer and felt like lipoma.

Fig. 2.—Appearance of tumor from side.

Nov. 16, 1926, the skin was infiltrated with 1 per cent procaine hydrochloride in a transverse line over the most prominent part of the tumor and incised. After this the loose subcutaneous tissue was diffusely infiltrated in advance of the dissection with 0.25 per cent procaine hydrochloride, and the tumor was easily shelled out of its capsule. After hemostasis, an elliptic area of redundant skin was excised and the subcutaneous tissues were closed with interrupted catgut sutures; the skin was closed with a continuous dermal suture with a small tube drain in the outer angle. There was considerable edema in the tissues for several days, but this gradually subsided and the skin wound healed by primary union. The specimen was ovoid and measured 23 by 16 by 8 cm. Grossly it appeared to be pure lipoma on the surface, but palpation of the tumor gave essentially the same sensation of consistency that was noted through the skin; that is, a greater firmness than is expected in a lipoma over a large part of the tumor. At least two thirds of the cross-section was occupied by a degenerated area, which came near the surface at several points and showed many streaks and spots of frank calcification which grated on the knife, and several small irregular cystlike depressions which contained a thick whitish fluid that resembled colostrum except that it was gritty. A galactocele was first considered, but evidence of true hypertrophied breast tissue at any point was lacking.

Microscopically, the tumor was partly pure lipoma, and showed here and there slight fibrosis and irregular areas of complete degeneration, in some of which calcium was deposited.

SPECIAL EXERCISES FOR STRETCHING THE ACHILLES TENDON

PHILIP LEWIN, M.D., CHICAGO

Many exercises have been used to increase the length and elasticity of the Achilles tendon. There is a question whether this structure can be stretched or not. It is probable that most of the so-called stretching is really stretching of the triceps surae muscle fibers or actually a tearing of tendon fibers from the muscle bellies.

The following exercises have been found very useful:

EXERCISE 1.—Simply walking on the heels across the room five times.

EXERCISE 2.—From the standing position with the feet parallel, the patient squats down to the position of sitting on the heels, maintaining the heels and toes on the ground. This is done in two counts.

EXERCISE 3.—The patient stands facing the wall with the toes 28 inches from it. The toes are placed together and the heels as far apart as possible. With the hands placed against the wall and the heels maintained on the floor, the entire rigid body is allowed to fall forward as far as possible by bending the elbows, and remain in this position a few seconds before returning to the starting position. This is done in two counts, about ten times.

EXERCISE 4.—The apparatus consists of two handles fastened to the wall and a heavy wooden block 3½ inches high, 12 inches wide and 7 inches in depth fastened to the floor. The position assumed is facing the wall standing with both forefeet on the block, and holding on to the handles. On the count of one, the heels are allowed to touch the floor, the body being kept parallel with the wall. On the count of two, the return is made to the starting position. The exercise is carried out from ten to twenty times, this number being attained gradually.

Fig. 1.—Exercise 4: in position, rising on toes.

Fig. 2.—Exercise 4: heels on floor, putting Achilles tendon on stretch.

EXERCISE 5.—The patient stands with forefeet on a stair facing upward and holding the balustrade, allows the heels to drop down. He then returns to the starting position.

104 South Michigan Avenue.

TREATMENT TIMER

H. L. CLAASSEN, M.D., CINCINNATI

The timing of treatments in contrast to the dosage of drugs has been relatively inexact, owing chiefly to the fact that an entirely satisfactory method of timing has not been available. Treatments consequently have been under or over exposed, the latter causing, in the case of ultraviolet therapy, rather severe and uncomfortable burns. Apparatus as well as patients should be protected from unnecessary operation, as quartz burners need revacuating and armatures regrinding, repairs which are expensive.

A thorough consideration of all factors necessary to accomplish the desired result leads to the conclusion that a timer should function as follows:

It should correctly time periods of from one minute up to at least forty-five minutes.

It should warn the operator and automatically turn off the current after the expiration of the time period for which it is set, independent of the operator.

It should be automatically integrating, i. e., in diathermy treatments, for instance, it is often necessary to interrupt or shut off the apparatus completely one or more times throughout the exposure. It should be possible to turn off the current as often as is desired, and the timer should automatically integrate the actual amount of treatment time, without any calculation on the part of the operator.

Instrument for timing treatments.

The apparatus should be under the control of the patient, who can interrupt the treatment and warn the operator, thereby eliminating burns and lawsuits.

The apparatus should be so constructed that no winding up is necessary, as is the case of an alarm clock apparatus, thereby guarding against the possibility of the timer running down and failing to function properly.

The time setting arrangement should be such that if accidently overset, the pointer can be instantly moved backward any desired amount, without the need of waiting for the elapse of the incorrect setting.

The electrical switch should be so arranged that it can be thrown in circuit momentarily for the purpose of testing or adjusting the apparatus, but cannot remain on unless the instrument is set for a given period of time.

It should preferably be arranged so that special complicated electrical wiring is not necessary, and likewise, the containing case should preferably be made of bakelite or some insulating material rather than metal, which would be electrically conducting.

I have had an instrument constructed which complies with these requirements in all respects. It is shown in the accompanying illustration.

4 West Seventh Street.

Education:—Education is a process in which the infant is conducted from birth through the period of growth and development to maturity, and in which his powers are developed and adjusted to a social order for complete living.—Hetherington: Fundamental Education, *Am. Phys. Ed. Rev.*, December, 1910, p. 629.

Special Article

TYPHOID IN THE LARGE CITIES OF THE UNITED STATES IN 1926

FIFTEENTH ANNUAL REPORT

THE JOURNAL presents its fifteenth annual survey of typhoid fever mortality in the seventy-eight cities of the United States that had more than 100,000 population in 1926.[1] As in the fourteenth report, the cities have been grouped according to the recognized divisions of the U. S. Census Bureau. One city (Jacksonville) appears for the first time in our tables.[2]

The cities of the New England group (table 1) make a remarkable showing, and one that would be creditable to any similar population group anywhere in the world. No less than seven of the twelve New England cities report typhoid death rates of less than 1 per hundred thousand of population. The total rate for the group (1.51) is the lowest for any geographic division in the United States (table 11). Two New England cities (New Bedford and Lowell) have had rates under 1 per hundred thousand of population for two years

TABLE 1.—*Death Rates of Cities in New England States from Typhoid per Hundred Thousand Population*

	1926	1925	1921–1925	1916–1920	1911–1915	1906–1910
Worcester	0.5	2.1	2.3	3.5	5.0	11.8
Bridgeport	0.6*	2.8†	2.2	4.8	5.0	10.3
New Bedford	0.7‡	0.8	1.7	6.0	15.0	16.1
Providence	0.7	3.4	1.8	3.8	8.7	21.5
Springfield, Mass.	0.7	1.4	2.0	4.4	17.6	....
Fall River	0.8	1.5	2.3	8.5	13.4	13.5
Lowell	0.9#	0.0	2.4	5.2	10.2	13.9
Hartford	1.2	1.9	2.5	6.0	15.0	19.0
Boston	1.8	3.5	2.2	2.5	9.0	16.0
New Haven	2.2	1.7	4.4	6.8	18.2	30.8
Lynn	3.8	1.0	1.6	3.9	7.2	14.1
Cambridge	4.9	1.7	4.3	2.5	4.0	9.8

* Rate calculated on population figures furnished by the health department: 170,717.
† Rate calculated on figures for population in 1922.
‡ Rate calculated on population figures furnished by the health department: 135,132.
# Rate calculated on population figures furnished by the health department: 112,759.

in succession, the average for the two years in Lowell being under 0.5 per hundred thousand, or less than one twentieth of the average for the quinquennium 1911-1915. Cambridge almost alone among New England cities seems to have had an undue number of deaths from typhoid in 1926, its rate (4.9) being more than three times the New England average. It will be remembered that this city also had a high typhoid year in 1921, with a rate of 10.8. The occasionally excessive typhoid in Cambridge in recent years is all the more noteworthy since, for the sixteen years 1906-1920, this city had easily the best typhoid record in New England.

In the Middle Atlantic states (table 2) three cities (Albany, Utica, Yonkers) achieve the proud distinction of having had not a single typhoid death in 1926. The other cities of the group for the most part make an admirable showing. Attention may be called especially to the remarkable records of Philadelphia and Pittsburgh in 1926, as contrasted with the typhoid rates from which these cities suffered in the period 1906-1910. Those who are inclined to minimize or to forget the importance of water-borne typhoid may

TABLE 2.—*Death Rates of Cities in Middle Atlantic States from Typhoid per Hundred Thousand Population*

	1926	1925	1921–1925	1916–1920	1911–1915	1906–1910
Albany	0.0	5.9	5.6	8.0	18.6	17.4
Utica	0.0	3.9	....	....	....	....
Yonkers	0.0	1.8	1.7	4.8	5.0	10.3
Syracuse	1.1	2.2	2.3	7.7	12.3	15.6
Paterson	1.4	2.1	3.3	4.1	9.1	19.3
Newark, N. J.	1.5	0.9	2.3	3.3	6.8	14.6
Jersey City	1.9	4.1	2.7	4.5	7.2	12.6
New York	1.9	3.3*	2.6	3.2	8.0	13.5
Philadelphia	1.9	2.3	2.2	4.9	11.2	41.7
Trenton	2.2	3.8	8.2	8.6	22.3	....
Reading, Pa.	2.6	0.9	6.0	10.0	31.9	42.0
Pittsburgh	2.7	3.2	3.9	7.7	15.9	65.0
Rochester	4.0	1.9	2.1	2.9	9.6	12.8
Scranton	4.2	0.0	2.4	3.8	9.3	31.5
Camden	4.6	7.0	5.9	4.9	4.5	....
Buffalo	5.0	4.5	3.9	8.1	15.4	22.8

* Rate calculated on figures for population in 1924, with same annual increment added as in 1922-1923, 1923-1924.

well ponder these figures. Philadelphia, a city with distinctly less favorable climatic conditions than New York and presumably with a high legacy of typhoid carriers from the long period when typhoid ravaged the city, now rivals New York in its low typhoid rate. In Pittsburgh the average typhoid mortality in the years 1906-1910 was nearly twenty-five times as great as the typhoid rate for 1926. The typhoid records in these two great cities constitute an outstanding demonstration of the efficacy of water purification.

Two of the Middle Atlantic cities (Rochester and Scranton) are somewhat out of line with the rest of the group in that they not only had in 1926 a considerably higher typhoid mortality than in 1925, but also a higher rate than for the two preceding five year periods. Camden shows a decline in 1926 as compared with 1925, which is an encouraging indication. An explanation seems to be warranted about the Buffalo rate which, as reckoned according to the ordinary methods, gives a somewhat false impression. It is officially

TABLE 3.—*Death Rates of Cities in South Atlantic States from Typhoid per Hundred Thousand Population*

	1926	1925	1921–1925	1916–1920	1911–1915	1906–1910
Norfolk	1.7	1.5*	....	....	....	....
Wilmington	2.4	3.3	4.7	....	....	....
Washington	2.5	5.0	5.4	9.5	17.2	36.7
Richmond	2.6	5.4	5.7	9.7	15.7	34.0
Baltimore	4.7	3.6	4.0	11.8	23.7	35.1
Jacksonville	8.8	....	....	....	....	....
Atlanta	17.2†	18.4‡	14.5	14.2	31.4	58.4

* Rate calculated on figures for population in 1924, with same annual increment added as in 1922-1923 and 1923-1924.
† Rate calculated on population figures furnished by the health department: 266,488.
‡ Rate calculated on population figures furnished by the health department: 250,000.

reported that ten of the twenty-seven deaths in that city in 1926 were from cases contracted in a neighboring community which suffered from a severe outbreak. Making allowance for this unusual occurrence, the record of typhoid infection in the city of Buffalo itself would seem to have been excellent. The rate for the whole geographic division (table 11) in 1926 (2.12) was much lower than in 1925 (3.01).

1. The preceding articles were published, May 31, 1913, p. 1702; May 9, 1914, p. 1473; April 15, 1915, p. 1322; April 22, 1916, p. 1305; March 17, 1917, p. 845; March 16, 1918, p. 777; April 5, 1919, p. 997; March 6, 1920, p. 672; March 26, 1921, p. 860; March 25, 1922, p. 890; March 10, 1923, p. 691; Feb. 2, 1924, p. 389; March 14, 1925, p. 813, and March 27, 1926, p. 948.

2. The deaths from typhoid in each city are those reported to us by the respective health departments. The rates have been calculated on the basis of the midyear 1926 population as estimated by the U. S. Bureau of the Census. In the nine instances in which such estimates were not available, the midyear population figures were furnished by the health departments of the respective cities.

The cities of the South Atlantic states (table 3) show a slight improvement, the rate for the geographic group dropping from 5.71 in 1925 to 5.38 in 1926 (table 11). The rate in the national capital (Washington, D. C.) is relatively very low (2.5) and marks a gratifying decrease over the previous low record (3.7 in 1919). Richmond also makes a fine showing. Atlanta, almost alone in this group, has shown little change for the better in the last ten years.

TABLE 4.—*Death Rates of Cities in East North Central States from Typhoid per Hundred Thousand Population*

	1926	1925	1921-1925	1916-1920	1911-1915	1906-1910
Youngstown	0.0	2.5	7.2	....	....	....
Flint	0.7	1.5	....	....	....	....
Chicago	0.8	1.5	1.4	2.4	8.2	15.8
Grand Rapids	1.3	1.3	1.9	9.1	25.5	29.7
Cleveland	1.4	1.5	2.0	4.0	10.0	15.7
Akron	1.5*	1.9†	2.4	....	....	....
Columbus	1.7	4.3	3.5	7.1	15.8	40.0
Milwaukee	1.7	1.4	1.6	6.5	13.6	27.0
Detroit	2.2	2.7	4.1	8.1	15.4	29.8
Dayton	2.3	1.7	3.3	9.3	14.8	22.5
Cincinnati	2.7	4.2	3.2	3.4	7.8	30.1
Canton	3.6	0.9	....	....	....	....
Toledo	4.7	6.3	5.8	10.6	31.4	37.5
Indianapolis	5.4	3.6	4.6	10.3	20.5	30.4

* Rate calculated on population figures furnished by the health department: 200,000.
† Rate calculated on figures for population in 1924.

The cities in the East North Central states (table 4) again make an excellent record. One city (Youngstown) does not have a single typhoid death to its discredit. Chicago establishes a new low record, the rate (0.8) being the lowest reported in 1926 for any American city with over 500,000 population. Chicago is one of the cities in which typhoid is carefully watched, a full analysis of the cases being published annually. It is stated in the annual report that the ratio of out-of-town infections to the total cases is about 1:3, and that in more than half of all cases reported the apparent modes of infection have been traced. The Chicago analysis states that in 1926 about 75 per cent of the typhoid cases were treated at hospitals. It is evident that with the increasing rarity of this disease, hospitalization is becoming more practicable, a circumstance that is highly favorable since it affords proper opportunities for control. Two cities in this group (Toledo and Indianapolis) continue to have rates considerably higher than the average. Columbus and Grand Rapids, which also had high rates in the period 1906-1920, have made considerably better records than Toledo and Indianapolis in recent years.

TABLE 5.—*Death Rates of Cities in East South Central States from Typhoid per Hundred Thousand Population*

	1926	1925	1921-1925	1916-1920	1911-1915	1906-1910
Louisville	6.7*	5.8	4.9	9.7	19.7	52.7
Birmingham	8.5	9.2	10.8	31.5	....	....
Memphis	19.2	28.6	20.3	27.7	42.5	35.3
Nashville	35.0	19.8	17.8	20.7	40.2	61.2

* Data for year Sept. 1, 1925 to Aug. 31, 1926.

The four cities in the East South Central states (table 5) appear to be in the worst typhoid belt in the United States. For the second successive year the total rate for this group (table 11) has been higher than that of any other geographic division. Birmingham and Memphis report lower rates in 1926 than in 1925, the figure for Birmingham being 8.5, which is especially encouraging. Nashville, on the other hand, appears to have suffered early in the summer from an old-fashioned typhoid epidemic, which carried its rate for the year to the highest point reached in any American city (35.0). The highest rate in 1925 was 28.6 (Memphis); and in 1924 the highest was 41.2 (Memphis).

TABLE 6.—*Death Rates of Cities in West North Central States from Typhoid per Hundred Thousand Population*

	1926	1925	1921-1925	1916-1920	1911-1915	1906-1910
Duluth	0.8	0.9	....	....	....	....
St. Paul	1.2	2.8	3.4	3.1	9.2	12.8
Minneapolis	1.4	3.3	1.9	5.0	10.6	32.1
Omaha	1.8	1.9	3.3	5.7	14.9	40.7
St. Louis	2.3	3.9	3.9	6.5	12.1	14.7
Des Moines	2.7	4.7*	2.2	....	....	....
Kansas City, Mo.	3.5	1.9	5.7	10.6	16.2	35.6
Kansas City, Kan.	4.3	7.7	5.0	9.4	....	....

* Rate calculated on figures for population in 1924, with the same annual increment added as in 1922-1923 and 1923-1924.

The cities of the West North Central states (table 6) pursue the even tenor of their way, only one city (Kansas City, Mo.) having a higher rate in 1926 than in 1925. Rates in this group show for the most part little fluctuation and for the past ten years have been rarely marked by any epidemic prevalence. Duluth, which started out in 1925 with 0.9, repeats this excellent record in 1926.

TABLE 7.—*Death Rates of Cities in West South Central States from Typhoid per Hundred Thousand Population*

	1926	1925	1921-1925	1916-1920	1911-1915	1906-1910
Houston	6.0*	5.5	7.6	....	....	....
San Antonio	7.8	8.6	9.3	23.3	29.5	....
Dallas	8.9	17.5	11.2	17.2	....	....
El Paso	9.2	3.8	10.8	30.7	42.8	....
Fort Worth	10.7	5.2	6.1	....	....	....
Tulsa	14.3	20.9	....	....	....	....
New Orleans	18.6	19.8	11.6	17.5	20.9	35.6

* Rate calculated on population figures furnished by the health department: 250,000.

The cities of the Southwest (table 7), on the other hand, show considerable annual variation. Dallas and Tulsa, which were high in 1925, record substantial reductions in 1926, while El Paso and Fort Worth report considerable increases. The New Orleans typhoid rate appears to be ranging somewhat higher than in the years 1916-1924.

TABLE 8.—*Death Rates of Cities in Mountain and Pacific States from Typhoid per Hundred Thousand Population*

	1926	1925	1921-1925	1916-1920	1911-1915	1906-1910
Salt Lake City	0.7	6.9	6.0	9.3	13.2	....
Oakland	0.8	1.2	2.0	3.8	8.7	21.5
San Diego	0.9	0.9	....	....	....	....
Los Angeles	1.1*	1.3*	3.0	3.6	10.7	19.0
Seattle	2.3†	2.5‡	2.6	2.9	5.7	25.2
Portland, Ore.	2.5#	2.1	3.5	4.5	10.8	23.2
San Francisco	2.5	2.2	2.8	4.6	13.6	27.3
Denver	3.5	5.0	5.1	5.8	12.0	37.5
Tacoma	3.8	1.9	3.7	2.9	10.4	19.0
Spokane	6.5	1.8	4.4	4.9	17.1	50.3

* Rate calculated on population figures furnished by the health department: 1,200,000.
† Rate calculated on population figures furnished by the health department: 345,000.
‡ Rate calculated on figures for population in 1924, with same annual increment added as in 1922-1923 and 1923-1924.
# Rate calculated on population figures furnished by the health department: 314,795.

The cities in the Mountain and Pacific states (table 8) show less proportionate typhoid reduction than those in the other geographic divisions, Portland (Ore.), San Francisco, Tacoma and Spokane all hav-

ing higher rates in 1926 than in 1925. Spokane, which was on the Honor Roll in 1925 with a rate of 1.8, brings up at the foot of this division in 1926. Oakland, however, which led this list in the quinquennium 1921-1925, again stands very high for the year 1926. San Diego repeats its excellent figure of last year (0.9), and Salt Lake City makes the fine new low record of 0.7.

TABLE 9.—*Death Rates from Typhoid in 1926*

Honor Roll (from 0.0 to 2.0 Deaths per Hundred Thousand)			
Albany	0.0	Syracuse	1.1
Utica	0.0	Hartford	1.2
Yonkers	0.0	St. Paul	1.2
Youngstown	0.0	Grand Rapids	1.3
Worcester	0.5	Cleveland	1.4
Bridgeport	0.6	Minneapolis	1.4
Flint	0.7	Paterson	1.4
New Bedford	0.7	Akron	1.5
Providence	0.7	Newark	1.5
Salt Lake City	0.7	Columbus	1.7
Springfield, Mass	0.7	Milwaukee	1.7
Chicago	0.8	Norfolk	1.7
Duluth	0.8	Boston	1.8
Fall River	0.8	Omaha	1.8
Oakland	0.8	Jersey City	1.9
Lowell	0.9	New York	1.9
San Diego	0.9	Philadelphia	1.9
Los Angeles	1.1		
First Rank (from 2.0 to 5.0)			
Detroit	2.2	Pittsburgh	2.7
New Haven	2.2	Denver	3.5
Trenton	2.2	Kansas City, Mo	3.5
Dayton	2.3	Canton	3.6
St. Louis	2.3	Lynn	3.8
Seattle	2.3	Tacoma	3.8
Wilmington	2.4	Rochester	4.1
Portland, Ore	2.5	Scranton	4.2
San Francisco	2.5	Kansas City, Kan	4.3
Washington	2.5	Camden	4.6
Reading, Pa	2.6	Baltimore	4.7
Richmond	2.6	Toledo	4.7
Cincinnati	2.7	Cambridge	4.9
Des Moines	2.7		
Second Rank (from 5.0 to 10.0)			
Buffalo	5.0	San Antonio	7.8
Indianapolis	5.4	Birmingham	8.5
Houston	6.0	Jacksonville	8.8
Spokane	6.5	Dallas	8.9
Louisville	6.7	El Paso	9.2
Third Rank (over 10.0)			
Fort Worth	10.7	New Orleans	18.6
Tulsa	14.3	Memphis	19.2
Atlanta	17.2	Nashville	35.0

TABLE 10.—*Total Typhoid Death Rate for Fifty-Nine Cities, 1910-1926* *

	Population	Typhoid Deaths	Typhoid Death Rate per 100,000
1910	21,125,340	4,143	19.61
1911	21,679,886	3,416	15.71
1912	22,234,865	2,800	12.59
1913	22,788,282	2,923	12.82
1914	23,342,199	2,443	10.46
1915	23,896,616	2,094	8.76
1916	24,338,470	1,874	7.69
1917	24,908,055	1,684	6.76
1918	25,142,605	1,583	6.30
1919	25,702,711	1,006	3.91
1920	26,340,793	934	3.54
1921	26,749,616	992	3.71
1922	27,133,857	862	3.18
1923	27,566,727	868	3.14
1924	28,174,489	870	3.09
1925	28,882,031 -	993	3.43
1926	29,620,891	822	2.77

* The following nineteen cities are omitted from this summary because data for the full period are not available: Akron, Birmingham, Camden, Canton, Dallas, Des Moines, Duluth, Flint, Fort Worth, Houston, Jacksonville, Kansas City (Kan.), Norfolk, San Diego, Springfield, Tulsa, Utica, Wilmington, Youngstown.

For the first time since these summaries were undertaken, as many as four cities have got through the year without a death from typhoid, and in more than a dozen others the typhoid rate was less than 1.0. The Honor Roll (cities with from 0.0 to 2.0 typhoid deaths per hundred thousand of population) this year numbers thirty-five, as against thirty last year and eighteen in 1924 (table 9). Six cities have been compelled to take third rank (rates above 10), the same number as in 1925. Nashville, Memphis, New Orleans, Atlanta and Tulsa also occupied positions in the third rank last year. Dallas has risen from third to second rank, but Fort Worth has dropped from second into the lowest class, while El Paso, in the first rank in 1925, just escapes being in the third rank in 1926.

The total average typhoid death rate for fifty-nine cities (table 10) is the lowest ever reported (2.77). This is in marked contrast to the rate in 1925, which showed a considerable increase over the three preceding years. Just as emphatically as 1925 was a "bad" typhoid year, so 1926 was a "good" typhoid year. In 1926 every geographic division except the East South Central states showed a decrease (table 11).

TABLE 11.—*Total Typhoid Death Rate According to Geographic Divisions—Seventy-Eight Cities in 1926, Seventy-Seven Cities in 1925* *

		1926		1925	
	Population, 1925	Typhoid Deaths	Typhoid Death Rate per 100,000	Typhoid Deaths	Typhoid Death Rate per 100,000†
New England states	2,521,608	38	1.51	58	2.37
Middle Atlantic states	11,399,000	241	2.12	346	3.01
South Atlantic states	2,226,488	120	5.38	117‡	5.71‡
East North Central states	8,117,000	137	1.69	174	2.19
East South Central states	836,000	121	14.47	111	14.30
West North Central states	2,479,000	55	2.22	81	3.31
West South Central states	1,478,000	173	11.69	180	13.27
Mountain and Pacific states	3,430,795	69	1.98	73	2.19

* The table corresponding to this one, in the article Typhoid in the Large Cities of the United States in 1925, was for fifty-nine cities only. The rate it gave for the South Atlantic states (8.12) was an error—the correct rate is 6.35.

† These rates are based on the population estimates for 1925 used in Typhoid in the Large Cities of the United States in 1925.

‡ Does not include data for Jacksonville.

The fact that the large cities in the United States had an actual diminution of 170 deaths from typhoid in 1926, as compared with 1925 (table 10), even although an estimated population increase of nearly a million occurred, should give great satisfaction to the municipal health officers, to whom the credit for this achievement is mainly due.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION.

W. A. PUCKNER, SECRETARY.

CULTURE BACILLUS ACIDOPHILUS-UNITED LABORATORIES.—A pure culture of *B. acidophilus* in vials, each containing about 120 cc. It contains not less than six hundred millions of viable organisms (*B. acidophilus*) per cubic centimeter at the time of sale.

Actions and Uses.—See Lactic Acid-Producing Organisms and Preparations (New and Nonofficial Remedies, 1926, p. 211).

Dosage.—15 cc. (4 fluidrachms), diluted with water and followed by a quantity of sugar of milk, twice daily. The culture is distributed by the manufacturer only and is sent by mail. Each vial bears an expiration date.

Manufactured by United Laboratories, Inc., Pasadena, Calif. No U. S. patent or trademark.

REPORTS OF OFFICERS

NOTE.—At the 1925 session of the Association, the House of Delegates suggested that all reports of officers, committees, etc., and resolutions to be brought before the House, if available, be published in advance of the session so as to permit careful consideration and discussion. — Ed.

REPORT OF SECRETARY

To the Members of the House of Delegates of the American Medical Association:

I have the honor to submit the following report for the year 1926-1927:

MEMBERSHIP

A new high mark in membership enrolment has been established, with 93,882 on the lists, March 1, 1927. The net gain over the enrolment at a corresponding date in 1926 was 2,090. Fluctuation from month to month, while not so marked as in some previous years, is still great enough to impose much unnecessary effort on the officers of county societies, on state associations and on the American Medical Association, and to cause a very considerable expense incident to removal and restoration of the names of those who do not comply with the provisions of by-laws governing membership and the payment of dues to component societies and to constituent associations. Early in the fall of 1926 the membership enrolment was above 93,000, but within three months fell to about 90,000, only to go up again by March 1, 1927, to nearly 94,000. This fluctuation was due entirely to the failure of 6,000 members, more or less, to maintain continuous affiliation, and required the removal and subsequent restoration to the rolls of county, state and national societies—all of which requires the expenditure of money that might easily be saved. Worse than the waste of money, however, is the weakening of our societies that can but result from the vacillations of a relatively large unstable membership. But even this feature of the situation, much as its correction may be desired, is relatively unimportant in view of the fact that approximately 94,000 of the physicians of the United States are now banded together to promote the high purposes for which the American Medical Association was established.

An accompanying table shows the number of members in the several states and territories, and presents other information of important interest.

FELLOWSHIP

For several years the annual reports of the Secretary have shown a constant gain in Fellowship. March 1, 1927, the roster of Fellows carried 60,958 names, 2,277 more than were recorded at a corresponding time in the preceding year. The persistent annual increase in the number of Fellows seems to indicate that, more and more, the members of the Association desire to make direct contribution to its support and to participate more actively in its undertakings.

CONSTITUENT ASSOCIATIONS

There is abundant evidence indicating the growing strength and a constantly widening influence of many of the constituent state associations. Several have effected changes in their plans that have given their councils, committees and officers opportunity for more work and more effective work. The official personnel of these associations has, for the most part, cheerfully assumed added responsibilities and has creditably discharged the duties imposed, while the members have responded cordially to the appeals of their officers and have supported efforts for advancement. The result has been, as it must have been, stronger state associations, better satisfied members and a growing influence for good.

Not all of the constituent associations have kept step with the most progressive. Some have been content to hold whatever has been gained by having a state organization and have made little progress, even though their facilities for better work are easily susceptible of development.

The smaller state organizations, handicapped as they are because of small and scattered membership, have carried on to splendid advantage. Some of them have done fine work, especially with regard to their scientific programs.

A relatively large number of the state associations have outlined definite working programs and have been diligent in their efforts to carry out these programs. Their example has been stimulating, and with each succeeding year the trend has been toward the adoption of specific and purposeful plans and toward the accomplishment of definite ends. Of necessity, the record will reveal that some undertakings have been purely in the nature of experimentation and have produced results of

Organization of Constituent State Medical Associations

	Number Component Counties in State	Number Component Societies in State	Number Counties in State Not Organized 1926	Number Counties in State Not Organized 1927	No. of Physicians in State (9th Ed. Directory)	Number Members of State Associations 1926	Number Members of State Associations 1927	Number A.M.A. Fellows in State
Alabama	67	67	..	..	2,284	1,612	1,609	535
Arizona	14	11	3	..	378	222	232	186
Arkansas	75	63	10	12	2,212	1,180	1,221	504
California	58	40	16	15	8,362	4,203	4,328	3,390
Colorado	63	24	25	30	1,837	1,068	1,117	742
Connecticut	8	8	..	..	1,884	1,229	1,257	889
Delaware	3	3	..	..	256	148	156	98
Dist. Columbia	..	..	..	..	1,813	549	567	435
Florida	63	31	32	21	1,452	700	1,016	459
Georgia	161	105	57	40	3,122	1,784	1,686	783
Idaho	44	12	17	1	416	239	232	157
Illinois	102	91	4	8	10,743	7,020	7,289	5,394
Indiana	92	81	6	4	4,251	2,671	2,774	1,614
Iowa	99	96	..	1	3,378	2,362	2,328	1,569
Kansas	105	61	42	39	2,361	1,556	1,525	911
Kentucky	120	112	10	6	3,041	1,850	1,941	793
Louisiana	64	42	21	20	1,991	1,248	1,267	742
Maine	16	15	1	1	1,037	785	794	388
Maryland	23	23	..	..	2,313	1,259	1,303	825
Massachusetts	14	18	..	2	6,187	4,248	4,336	2,886
Michigan	83	53	7	7	4,857	2,083	2,979	2,008
Minnesota	87	36	8	5	2,823	2,053	2,106	1,461
Mississippi	82	24	9	10	1,702	976	988	370
Missouri	115	93	8	16	5,806	3,270	3,263	2,025
Montana	56	17	39	26	525	209	327	204
Nebraska	93	54	34	23	1,869	1,227	1,317	800
Nevada	17	3	14	14	139	91	92	68
New Hampshire	10	10	..	..	601	489	481	270
New Jersey	21	21	..	..	3,567	2,240	2,326	1,667
New Mexico	31	13	14	18	365	260	229	146
New York	62	60	1	1	17,671	10,885	11,121	7,406
North Carolina	100	88	20	7	2,281	1,685	1,708	712
North Dakota	53	14	2	9	485	394	394	282
Ohio	88	87	3	..	8,113	5,240	5,162	3,015
Oklahoma	77	62	9	14	2,524	1,553	1,652	893
Oregon	36	14	2	4	1,176	551	562	422
Pennsylvania	67	63	4	4	11,140	7,502	7,638	5,040
Rhode Island	5	6	1	1	771	423	443	327
South Carolina	46	40	5	6	1,317	861	801	385
South Dakota	69	13	2	11	604	343	372	243
Tennessee	95	67	25	26	3,128	1,571	1,574	750
Texas	254	135	73	78	6,063	3,479	3,612	2,483
Utah	29	7	22	22	505	357	369	238
Vermont	14	10	3	3	537	353	361	190
Virginia	100	52	43	29	2,534	1,846	1,835	808
Washington	39	19	20	18	1,781	1,132	1,218	905
West Virginia	55	27	14	5	1,753	1,020	1,069	609
Wisconsin	71	51	1	3	2,886	2,064	1,995	1,445
Wyoming	24	8	13	14	255	149	157	99
Alaska	..	..	..	..	56	21	18	2
Hawaii	5	4	..	1	225	131	133	64
Porto Rico (districts)	7	7	..	..	321	166	228	58
Canal Zone	..	..	..	..	127	110	98	24
Philippine Islands (provinces)	56	6	..	53	905	174	219	44
Foreign	..	..	..	..	..	..	..	161
Total	3,138	2,067	640	628	148,644	91,792	93,882	58,641
Commissioned officers, Honorary and Affiliate Fellows								2,317

small value; but, even so, progress will be made. The splendid spirit of cooperation existing between the constituent associations makes it possible for all to learn of the failures and successes of any. There is no disposition to claim "exclusive rights," but rather there is a generous willingness to have the possible benefits of every workable plan extended for the common good.

It is desirable that the constituent associations shall be strong and progressive organizations. In developing their strength and in promoting their ends as state organizations it must never be forgotten that the county society is the basic unit and therefore the essential factor in the present scheme of organization. As long as this scheme is adhered to it is important that the county society be made and kept as strong as possible. If all the strength is built into the superstructure, the edifice will fall.

County Societies

There are approximately 2,100 component county societies reported as being in actual existence. As a matter of fact, a relatively large number of them do not function except as their nominal organization enables those whose names are on their rolls to hold membership in constituent state associations and in the American Medical Association. Some can never be maintained as efficient working bodies, but for obvious reasons must be continued. Their members, through no fault of their own, find it impossible to maintain active organization or even to participate with physicians in adjoining counties in the organization of joint societies. Other county societies that are practically dormant might do well to join with those of adjacent counties. Still others have memberships large enough and all conditions favorable for active and efficient operation, but seem to prefer inactivity. These exert a weakening influence that is detrimental to medical organization in state and nation. The officers of the state associations are, for the most part, fully awake to this situation and are working for its correction.

The county societies that are operating under advantageous circumstances have established high records of accomplishment during the year covered by this report. Better scientific programs, better attendance at regular meetings, greater interest in professional and public welfare and a constantly growing influence for good are reflected in official reports. As the stronger and more progressive state associations have done, so also the really active county societies have developed well constructed working programs for the accomplishment of definite ends and are diligent in their prosecution.

District Societies

In several states the district society has been rapidly and profitably developed as an effective arm of medical organization. The state associations that have undertaken educational programs for the benefit of their members have found that the district society offers splendid advantages for making these programs successful. As has been pointed out in reports previously offered and in papers prepared by other observers, the district society can and should contribute to the upbuilding of the county society and should not be permitted to become a substitute for it.

Organizational Activities

Officers of the Association, members of the Board of Trustees and the administrative personnel at headquarters have officially represented the Association at many meetings of state associations and district and county societies. These official visits have included Colorado, Montana and Wyoming and other states west of the Mississipi, Maine to the northeast, Louisiana to the south and numerous others in intervening territory. More such visits have been made during the past year than in any similar period for many years.

The annual Conference of Secretaries of Constituent State Medical Associations was held in Chicago in November and was well attended. Editors of all state association journals were invited and several were present. It was gratifying to note the presence at this conference of some of the general officers of state associations who came to the conference of their own accord to secure information and suggestions that might be useful in helping them to serve their respective societies to better advantage.

Whenever possible, the heads of departments have responded to requests for conferences with committees or other official groups of state associations and have sought to render such assistance as has been possible.

Advantage has been taken to the fullest possible extent of opportunities offered to acquaint the public with the aims and work of organized medicine as it is represented by the American Medical Association. Addresses have been delivered before a number of important societies of laymen, before students of schools, colleges and universities, at public meetings under the auspices of medical societies, and at other gatherings.

Correspondence in the office of the Secretary, as in other departments, has been very large and has reflected an increasing zeal on the part of hundreds of the officers of state and county societies in the discharge of official duties.

In this connection the Secretary desires to record his opinion to the effect that more work and better work is now being done by state associations and county societies than ever before during his official connection with the Association. There has been a remarkable development of initiative, aggressiveness, invention and persistency of effort on the part of general officers, councils and standing and special committees. As scientific bodies, as organizations dealing with problems of professional interest and as groups on which certain obligations and duties to the public are naturally and unavoidably imposed, many of the component societies and constituent associations have measured fully up to the highest standards of efficiency. Their example will, it is hoped, stimulate those societies that are lagging in interest and effort, to the end that the purposes of medical organization throughout the states and territories may be realized in every section and in every civil unit.

Disaster Relief

Eleven state associations and 120 county societies have officially adopted the plan for providing medical relief in disasters as recommended by a special committee at the Dallas Session.

Constitution and By-Laws for Constituent Associations

At the Atlantic City Session in 1925, a committee of the House of Delegates reported a draft of a constitution and by-laws thought to be suitable for adoption by constituent state associations. This was referred to the state associations for consideration and has been adopted, with some modification, by two or three of them. A few others have given it consideration, but these have either failed to take final action or have felt that it would be unwise to change from the constitutions and by-laws now in effect. A number of the state associations have, so far as the Secretary is advised, failed to give any consideration to this important matter.

There is need for the revision of the constitution and by-laws that has been generally adopted by county societies. The committee, in submitting its report at Atlantic City, recommended that the preparation of the draft of a constitution and by-laws for county societies be postponed until the state associations have acted. This recommendation was based on the fact that county societies receive their charters from state associations and on the necessity for avoidance of conflict between the constitution and by-laws of the county society and that of the state association. It is desirable that there shall be uniformity with regard to all basic provisions of our organic laws, and it is quite apparent that there is a need and a demand for revision to that end.

Proposed Amendment to Constitution of the American Medical Association

The Reference Committee on Amendments to the Constitution and By-Laws recommended, at the Dallas Session, that Article 10 of the Constitution be amended to read:

> The House of Delegates and the Scientific Assembly shall meet annually at times and places to be fixed by the Board of Trustees. A session may be held at any place in the United States.

Article 10 of the Constitution now reads:

ARTICLE 10.—ANNUAL SESSIONS

The House of Delegates and the Scientific Assembly shall meet annually at times and places to be fixed by the House of Delegates. The time and place of any of these sessions may, however, be changed by the unanimous action of the Board of Trustees at any time prior to two months of the time selected for that session. A session may be held at any place in the United States.

NOTICE OF PROPOSED AMENDMENT TO BY-LAWS OF THE AMERICAN MEDICAL ASSOCIATION

Notice was given at the Dallas Session by Dr. Horace M. Brown, Delegate from Wisconsin, that he would, at the 1927 session, propose amendment of Section 4, Chapter IV, of the By-Laws so as to provide for the submission to the House of Delegates of reports of reference committees before the election of officers at the last meeting of the House at each annual session.

IN APPRECIATION

The office of the Secretary has had the most courteous and kindly cooperation from officers and members with whom official contacts have been made, for which grateful acknowledgment is hereby offered.

OLIN WEST, Secretary.

REPORT OF THE BOARD OF TRUSTEES

To the Members of the House of Delegates of the American Medical Association:

During the year covered by this report, the work of the Association has expanded both in scope and in quantity, and all possible effort has been exerted to improve the quality of service rendered. The demands for service made on every council, bureau and department have constantly increased. The volume of scientific matter presented in most of the publications of the Association has been materially larger than in previous years. While expenditures necessary for carrying on the work were much greater in amount than those of the preceding year, the income also was larger; hence the financial report appended hereto makes a satisfactory showing.

The Journal of the American Medical Association

THE JOURNAL has pursued the policies of previous years in discussing the progress of medicine as rapidly as possible consistent with scientific conservatism. Continuous improvement is being made in the form of presentation of material, notably in illustration of news and in the arrangement of articles within the pages. An innovation has been the prompt announcement of new books in the medical field, with brief critical notes.

The publication of the section papers within six months after the annual session at which they were read continues to be a difficult problem. More than three hundred papers are presented at each annual session, and if all were published in THE JOURNAL, a minimum of thirty weeks would be required in which to dispose of them. Because of the care now used in selecting papers for the program, a higher percentage of these manuscripts meet the standard set for THE JOURNAL; so it is difficult to find place for volunteered contributions during the six months immediately following the annual session.

The various departments heretofore maintained in THE JOURNAL have been continued and have been expanded in keeping with their relative importance.

SUBSCRIPTION DEPARTMENT

The total circulation of THE JOURNAL, Jan. 1, 1926, was 86,582 and on Jan. 1, 1927, 90,312, indicating an increase of 3,730 during the year 1927. This includes exchanges, advertisers and a limited complimentary list, but it does not include Fellows of the Association who are commissioned officers in government services; honorary, affiliate and associate Fellows; Fellows whose JOURNALS are being held temporarily for necessary adjustments, or those Fellows who are receiving special journals in lieu of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

The total number of copies of THE JOURNAL printed in 1926 was 4,666,619, a gross weekly average of 89,742.

The total number of Fellows on the mailing list, Jan. 1, 1927, was 55,786, an increase of 2,081 over the preceding year. The total number of subscribers, other than Fellows, Jan. 1, 1927, was 33,705, an increase of 1,592. Table A presents an approximate count of Fellows and of subscribers, Jan. 1, 1927, and indicates the gain or loss in each state and territory that year over the previous year.

TABLE A.—*Approximate Count of Fellows and Subscribers on Mailing List, Jan. 1, 1927; Also Gain or Loss Over the Previous Year*

State	Fellows	Subscribers	Totals	Gain for Year	Loss for Year
Alabama	516	293	809	..	5
Arizona	168	99	267	24	..
Arkansas	477	221	698	39	..
California	3,278	2,007	5,285	230	..
Colorado	704	335	1,039	29	..
Connecticut	812	458	1,270	43	..
Delaware	94	52	146	7	..
District of Columbia	416	447	863	55	..
Florida	557	316	873	83	..
Georgia	738	348	1,086	..	53
Idaho	145	78	223	..	3
Illinois	5,103	2,698	7,801	282	..
Indiana	1,507	766	2,273	95	..
Iowa	1,443	592	2,035	20	..
Kansas	885	348	1,233	..	6
Kentucky	755	358	1,113	17	..
Louisiana	714	268	982	37	..
Maine	375	159	534	..	16
Maryland	798	467	1,265	..	2
Massachusetts	2,756	1,249	3,965	28	..
Michigan	1,882	1,239	3,121	133	..
Minnesota	1,311	717	2,028	90	..
Mississippi	340	199	539	35	..
Missouri	1,954	913	2,867	42	..
Montana	191	128	319	7	..
Nebraska	746	405	1,151	..	18
Nevada	66	21	87	..	3
New Hampshire	270	62	332	..	1
New Jersey	1,651	908	2,559	40	..
New Mexico	142	71	213	..	4
New York	6,993	4,476	11,469	650	..
North Carolina	669	385	1,054	87	..
North Dakota	243	104	347	5	..
Ohio	2,991	1,653	4,644	103	..
Oklahoma	812	310	1,122	183	..
Oregon	357	353	710	86	..
Pennsylvania	4,868	2,253	7,161	181	..
Rhode Island	318	139	457	34	..
South Carolina	314	221	585	..	2
South Dakota	228	131	359	..	2
Tennessee	704	469	1,173	88	..
Texas	2,234	750	2,984	504	..
Utah	206	98	304	1	..
Vermont	193	83	276	..	11
Virginia	768	572	1,340	15	..
Washington	637	400	1,037	45	..
West Virginia	577	384	961	88	..
Wisconsin	1,310	681	1,991	101	..
Wyoming	95	57	152	..	1
U. S. Army	...	180	180	..	13
U. S. Navy	...	275	275	..	..
Alaska	11	17	28	1	..
Canada	21	970	991	2	..
Cuba	4	56	60	6	..
Hawaii	32	58	110	..	..
Mexico	19	109	128	..	2
Panama	20	21	41	..	4
Philippine Islands	41	113	154	..	12
Porto Rico	53	41	94	5	..
Virgin Islands	...	3	3	..	..
Foreign	134	2,161	2,295	185	..

Table B shows the number of physicians (based on the Ninth Edition of the American Medical Directory) in the United States, the number receiving THE JOURNAL, and the approximate percentage in each state. Physicians in the Medical Corps of the United States Army and of the United States Navy, the United States Public Health Service, etc., are not included in this table.

ADVERTISING DEPARTMENT

The total receipts from the sale of advertising space in the publications of the Association for the year 1926 were $798,059, which represents a handsome gain over the receipts from the same source in the preceding year. It is intended that the advertising pages of the publications issued by the Association shall render a distinct service to all concerned. To this end, the same careful censorship which heretofore has been exercised was continued during the year covered by this report. Much advertising material that was tendered has been refused because it failed to meet the standards established by the Association with respect to the character of material admitted to the pages of the periodicals published by the Association.

TABLE B.—*Percentage of Physicians Receiving The Journal*

State	Number Receiving Journal	Physicians in State, 9th A. M. A. Directory	Approximate Percentage, 9th A. M. A. Directory
Alabama	809	2,284	35
Arizona	267	378	70
Arkansas	698	2,212	31
California	5,285	8,393	63
Colorado	1,039	1,837	56
Connecticut	1,270	1,884	67
Delaware	146	256	57
District of Columbia	863	1,813	47
Florida	873	1,452	60
Georgia	1,086	3,122	35
Idaho	221	416	53
Illinois	7,801	10,743	72
Indiana	2,273	4,251	53
Iowa	2,035	3,378	60
Kansas	1,223	2,264	52
Kentucky	1,113	3,041	36
Louisiana	982	1,991	49
Maine	534	1,037	51
Maryland	1,365	2,313	55
Massachusetts	3,965	6,187	64
Michigan	3,121	4,837	64
Minnesota	2,028	2,823	73
Mississippi	539	1,702	31
Missouri	2,867	5,806	50
Montana	319	525	59
Nebraska	1,151	1,869	61
Nevada	87	129	67
New Hampshire	332	601	55
New Jersey	2,569	3,567	73
New Mexico	213	365	58
New York	11,439	17,671	64
North Carolina	1,054	2,281	46
North Dakota	347	485	71
Ohio	4,644	8,113	57
Oklahoma	1,122	2,524	44
Oregon	710	1,176	60
Pennsylvania	7,161	11,140	64
Rhode Island	457	771	59
South Carolina	585	1,317	44
South Dakota	359	604	59
Tennessee	1,173	3,128	37
Texas	2,984	6,063	49
Utah	304	505	60
Vermont	276	537	51
Virginia	1,340	2,534	52
Washington	1,057	1,781	59
West Virginia	961	1,753	54
Wisconsin	1,991	2,826	70
Wyoming	152	255	60

The Spanish Edition

The Spanish Edition of THE JOURNAL has maintained its unique position in the Spanish-American medical field. It has the widest circulation of all medical journals printed in Spanish, in spite of active advertising campaigns conducted in behalf of some of those published in European countries. Matter that has appeared in the Spanish Edition of THE JOURNAL has been widely used by other journals that circulate among Spanish-speaking countries, and at times due credit has not been given.

The number of inquiries from subscribers, as well as from nonsubscribers, in South American countries, concerning practically every branch of medical science, is constantly increasing. This would seem to indicate that the Spanish Edition of THE JOURNAL represents American medicine in those countries, and that it is being considered as a dependable source of information concerning the modern practice of medicine.

It is gratifying to know that a number of articles and pamphlets printed in Spanish have appeared lately describing the work of the American Medical Association, and, more especially, the work of its Council on Pharmacy and Chemistry and its Bureau of Investigation.

Through the Spanish Edition, Spanish—and to a less extent even French and Italian—speaking physicians have become better acquainted with THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, the various special journals and other publications issue by the Association, as well as with the many-sided activities of organized medicine in the United States.

In this connection may be mentioned the attendance of a number of prominent Mexican physicians at the last annual session of the Association. The presence of these physicians from a neighboring republic was fully appreciated, and it is hoped that the professional ties between our country and Mexico were strengthened thereby. Invitations have been extended to the members of medical societies in Latin-American countries to attend the Washington Session.

During the last year, a series of Spanish-English medical booklets and dictionaries were brought to completion. The demand for these publications has been considerable: The first three, "El Español para el Medico," "Medical English" and "Spanish-English Medical Dictionary," are already in their second or third printing; the last one of the series, "English-Spanish Medical Dictionary," has only recently been issued.

The total circulation of the Spanish Edition, Jan. 1, 1927, was 2,545, an increase of 257 over the preceding year.

The publication of the Spanish edition in 1926 entailed a net loss of $14,399.13, which is $2,659.03 more than the loss sustained in 1925. The Rockefeller Foundation has generously continued its support of the Spanish Edition, and has assumed one half of the net cost.

The appended table shows the actual paid circulation of the Spanish Edition in the various countries. The copies sent to advertisers and exchanges, and the complimentary copies are not included in this table.

TABLE C.—*Distribution of the Spanish Edition*

Africa	1	Mexico	335
Argentina	198	Nicaragua	15
Bolivia	33	Panama	11
Brazil	153	Paraguay	11
Chile	74	Peru	68
Colombia	80	Philippine Islands	112
Costa Rica	21	Porto Rico	29
Cuba	337	Portugal	17
Dominican Republic	20	Salvador	28
Ecuador	15	Spain	664
Germany	2	United States	58
Guatemala	29	Uruguay	65
Honduras	8	Venezuela	37
Italy	5		

Special Journals

There has been little variation from the basic policies that have controlled the publication of this group of periodicals. Their places in the special fields they cover are so high that most of the manuscripts regularly developing in these fields are submitted to these publications. The headquarters office has been repeatedly asked by the editorial boards of these journals for opportunity to use as much as possible of this valuable material, and the compliance with these demands has resulted in the enlargement of practically all the special journals.

Favorable comment is continually being received on the high character of these journals, both from the editorial and from the mechanical point of view.

The ARCHIVES OF PATHOLOGY AND LABORATORY MEDICINE—the newest member of the group—has established a high place for itself in its field. A recent letter from a competent observer states:

> There seems to be no current medical journal published that has as high a standard as the ARCHIVES OF PATHOLOGY. The character of its make-up is quite in keeping with that of its contents.

The enthusiastic reception of this periodical, both in the United States and abroad, has established it as a landmark in the growth of pathologic science in this country.

The enlargement and the improvement of the special journals have brought about an increased circulation for the whole group. The largest gain was made by the AMERICAN JOURNAL OF DISEASES OF CHILDREN—448. The mailing list of the ARCHIVES OF PATHOLOGY AND LABORATORY MEDICINE shows 528 more names, Jan. 1, 1927, than on Jan. 1, 1926, but it is to be remembered that the publication of this journal was not begun until January, 1926, and its circulation record therefore is not comparable with that of the older members of this group.

While the improvement made has brought about increased distribution, the expenditures also have been considerably larger. For the whole group, excluding the ARCHIVES OF PATHOLOGY AND LABORATORY MEDICINE, there was a gain in total income for the year of $8,450.63 over the preceding year. The costs of publication for these six journals were $6,807.21 in excess of the income received.

The launching of a new publication is always an expensive procedure, and especially is this so with a periodical of the

quality of the ARCHIVES OF PATHOLOGY AND LABORATORY MEDICINE. This journal in its first year shows a loss, including overhead expense charged against it, of $8,703.24.

These special journals constitute an important contribution on the part of the Association to the advance of scientific medicine, and it is believed that the expense which their publication entails is thoroughly justified.

Hygeia

The circulation of HYGEIA was gradually increased during 1926 until, at the end of the year, the mailing list carried 50,575 names. This represents a gain in circulation over 1925 of 10,028. The average net paid circulation was 44,844.

There was a gain in circulation in every state, except Louisiana; the largest gain was made in Missouri. The circulation for the year showed an increase of 561 among physicians and of 7,198 among laymen. In 1924, 53 per cent of the total circulation was among laymen; in 1925, 56 per cent, and in 1926, 62 per cent. There has been a slow but constant gain in the news-stand sales—a little over 2,600 copies more in 1926 than in the previous year.

The Women's Auxiliaries of several of the state medical associations have been actively interested in extending the circulation of HYGEIA. Their assistance has been of inestimable value and has been gratefully received. A few individual physicians have entered relatively large numbers of subscriptions for laymen. One physician in an Eastern state remitted a little more than $500 in payment for subscriptions to HYGEIA for libraries and reading rooms of various institutions.

The advertising income also shows a gratifying increase. The total gross income from HYGEIA was $222,139.52. This amount includes $90,957.02 prepaid subscriptions which were carried forward at the end of the year; thus the net income for the year from subscriptions and sales was $131,182.50. As the total cost of publication was $165,240.07, there was a net loss occasioned by the publication of HYGEIA of $34,057.57. Promotional costs and commissions on all the prepaid business were charged against the 1926 account because they were paid during that year. If, instead, these costs were proportionately distributed, the net loss for the year would be materially reduced.

The costs of promoting a magazine for the public are unavoidably large. The experience of HYGEIA in this connection is not any different from that of other publications designed for general distribution. It is believed, however, that the constant gain recorded from year to year may be taken as an indication that HYGEIA will in due time be established on a self-supporting basis. As the circulation of the magazine increases, its value as an advertising medium is enhanced and the possibilities of securing income from this source are more certain. Until there has been a material growth in the distribution of HYGEIA, however, it is probable that the periodical will continue to be published at a loss, and this loss, of course, will vary in amount from year to year, depending on various conditions which must be met in the publishing field.

That HYGEIA is appealing favorably to its readers is indicated by the large number of commendatory letters and comments that are continually being received. Only an occasional criticism of an unfavorable nature now comes to its editors. The magazine is being used more and more by teachers in public and private schools, and by other groups that have to do with health education. In a few instances, large manufacturing concerns have subscribed for a number of copies of the magazine for the use of employees.

The material appearing in HYGEIA is being more widely used in the columns of other publications.

Quarterly Cumulative Index to Current Medical Literature

The QUARTERLY CUMULATIVE INDEX has been enlarged and improved during the past year. More journals were indexed than ever before, and greater care was taken with respect to the selection and classification of titles, to cross-indexing, etc.

The total circulation, Jan. 1, 1927, was 1,299, an increase of twenty-eight over the preceding year. As a result of the enlargement and improvement, there was a decided increase in the cost of production. The net loss amounted to $17,518.30, as against $12,678.53 in 1925.

During the year, a combination of the QUARTERLY CUMULATIVE INDEX and the INDEX MEDICUS, heretofore published by the Carnegie Institution, was arranged for, and the first volume of the combined publication appeared in May of the current year. The Carnegie Institution has made generous contribution for the support of the INDEX, to be continued over a term of years.

That the identity of the two publications might be retained, the name "QUARTERLY CUMULATIVE INDEX MEDICUS" was decided on for the combined indexes, and will be used in the future. The best points in both have been incorporated in the new volume, which is essentially an index of the complete medical literature of the world. Numerous letters and comments received relative to this combination indicate the belief of those interested in medical bibliography that the needs of workers who require the use of a volume of this kind will be met far better by the new publication than through the publication of two independent volumes. The value of having easy reference to the medical literature of the world available for research workers and for all those who contribute to medical literature cannot be estimated. It means the saving of a vast amount of research, time and money. The publication of the QUARTERLY CUMULATIVE INDEX MEDICUS is an essential service to the progress of medicine.

American Medical Directory

The material for the Tenth Edition of the American Medical Directory has been in course of compilation during the year, and the new volume of this very valuable publication is about ready for distribution. Nearly 8,000 copies of the Ninth Edition were sold. It is evident that this publication is coming more and more into general favor among physicians and among those with whom physicians must deal. The Directory is of immense value to the Association itself, as well as to hospitals and to other medical institutions.

Cooperative Medical Advertising Bureau

The number of state medical journals published in 1926 was the same as in 1925. Thirty of the thirty-one were served by the Cooperative Medical Advertising Bureau in securing advertising contracts.

The total amount of advertising secured for these journals through the bureau was somewhat over $126,000, and exceeded the advertising income secured in 1925 by slightly more than $15,000. The collection of the proceeds from advertising contracts was made through the bureau, and remittances were sent from its office to the state journals. The sum of $10,500 was rebated to these journals at the end of the year. This represents an increase of $4,200 over the amount similarly rebated in 1925, and effected very material decrease in the commissions paid by the various journals for the securing of advertising.

There are at present eight state medical associations which do not have their own journals, and which are not represented in any state journal: Alabama, North Carolina, Maryland, Connecticut, New Hampshire, Vermont and North and South Dakota. There seems to be a tendency toward the combined use of state journals by two or more associations, rather than toward the establishment of new periodicals by the individual state associations. Several of the smaller state associations have adopted established journals as their official organs. Three are represented by privately owned journals which do not maintain the advertising standards of the association.

The management of the *New York State Journal of Medicine* has given notice that that journal will no longer participate in the activities of the Cooperative Medical Advertising Bureau. This does not mean that any change will be effected in the policy of that journal with respect to advertising standards or to adherence to the rulings of the Council on Pharmacy and Chemistry. It is the understanding of the bureau that the management feels that the New York journal can handle its advertising business to better advantage by direct methods.

The sole purpose of the Cooperative Medical Advertising Bureau is to provide revenue for the benefit of medical

journals owned and published by state associations. Constant effort is being made to increase the efficiency of the bureau and to enhance the value of its work in the interest of these journals.

Bureau of Health and Public Instruction

HEALTH EDUCATION ACTIVITIES

There is a steady increase in the number of physicians and of other persons seeking the health education of the public and requesting material to aid them in this service. There is, of course, a wide difference in the several states as to the extent and effectiveness of activity in this direction. One of the chief functions of the bureau is to supply suitable material to individuals and organizations in those states in which the state agencies are less active in this field.

NEW PAMPHLETS

The following reprints from HYGEIA have been added to the bureau's series during the year. The expense to the bureau of these publications has been minimal.

1. How to Put Humidity in the Home. Dr. E. P. Lyon. January HYGEIA.
2. The Family Doctor. Dr. William Allen Pusey. February HYGEIA.*
3. Trachoma Among the North American Indians. Dr. L. Webster Fox. February HYGEIA.*
4. A Change of Climate. Dr. Guy Hinsdale. March HYGEIA.*
5. Why Fumigate? Dr. Harold B. Wood. April HYGEIA.*
6. A Child Is to Be Born. Dr. Frank W. Lynch. May HYGEIA. Reprinted as a single pamphlet and in combination with six subsequent articles.
7. How to Gain Weight. L. A. Miller. May HYGEIA.
8. A Child Is to Be Born. Dr. Jennings C. Litzenberg. June HYGEIA. Reprinted as a single pamphlet and in combination with six other articles.
9. Boils. Norman Tobias. June HYGEIA.
10. A Child Is to Be Born—Exercise and Bathing for the Expectant Mother. Dr. J. P. Greenhill. July HYGEIA.†
11. The Unveiling of the Statue of Crawford W. Long. Dr. Hugh H. Young. July HYGEIA.*
12. Making Food Attractive for the Sick. Lulu Graves. July HYGEIA.*
13. The World War Against Disease. Dr. C.-E. A. Winslow. July HYGEIA.*
14. Training the Child to Obey. Smiley Blanton and Margaret Gray Blanton. Reprinted from the August, September and October HYGEIA.
15. A Child Is To Be Born—Planning the Layette. G. F. Earnshaw. August HYGEIA.†
16. Common Sense In Mouth Hygiene. Dr. William M. Gardner. September and October HYGEIA.
17. Eating Hazards After Fifty. Clarence W. Lieb. September HYGEIA.*
18. A Child Is To Be Born—The Diet of the Expectant Mother. Dr. Anna Ross Lapham. September HYGEIA.†
19. Glaucoma. Dr. Edward Jackson. September HYGEIA.
20. A Child Is To Be Born—The Clothing Of The Expectant Mother. Dr. Belle S. Mooney. October HYGEIA.†
21. A Square Meal. R. H. A. and Violet G. Plimmer. November HYGEIA.
22. A Child Is To Be Born—Care of the Teeth. Dr. Frederick B. Noyes. November HYGEIA.†
23. Our Emotional Lives. Dr. Jessie Taft. December HYGEIA.*
24. The Deafened. Gordon Berry. December HYGEIA.
25. How X-Rays Aid The Public. Millard B. Hodgson. December HYGEIA.*
26. Health Examinations. Dr. Lenna Meanes. December HYGEIA.*

* Reprinted on author's order.
† Reprinted with other articles in a single pamphlet.

TOTAL ITEMS DISTRIBUTED

The total distribution of material by the bureau is shown in the following table:

	1926	1925
Cancer pamphlets	1,415	2,564
Vision pamphlets	1,125	4,819
Research pamphlets	507	540
Score cards, tables and record sheets	20,684	17,675
Sex education	9,225	6,548
Baby welfare pamphlets	39,095	17,836
Baby welfare posters	282	330
Health and education	2,854	4,604
Public health	1,600	1,499
Communicable diseases	2,355	4,490
HYGEIA reprints	7,800	17,680
Health poster booklet	1,470	1,647
Health examination blanks	123,000	97,596
Health examination instructions	975	5,575
Manual of suggestions	30,505	31,455
Total number of units	242,892	214,858

There has been an increase of 28,034 in the total number of units in 1926, as contrasted with 1925. This increase is shown mainly in the following items: pamphlets on sex education, infant welfare, public health and periodic health examinations. There has been a diminution in number of some of the other items on the list, among them the pamphlets on cancer and on conservation of vision, the baby welfare posters and the Health in Education series.

There has been added to the series of the Joint Committee on Health Problems in Education, which are for sale by the bureau and by the National Education Association, a valuable report on "The Ventilation of School Buildings," which was adopted by the National Education Association a year ago.

The Health Charts series which is published by the Joint Committee, but which heretofore was printed in New York, will hereafter be printed by the American Medical Association. The plates and a large supply of these valuable charts have been turned over to the Association, without cost, by Dr. Thomas D. Wood, the chairman of the Joint Committee. New copies of about twenty-two of these charts are now being printed for the bureau; one half the cost will be borne by the bureau and the other half by the National Education Association. One half of the charts will be kept in stock by each association and each will fill orders. It might be said that these posters have been in steady demand during the last seven or eight years and have served a very useful purpose in the educational world.

Arrangements have been made for an entirely new series of infant welfare posters.

COOPERATION WITH OTHER ORGANIZATIONS

The National Education Association.—The relations between the National Education Association and the American Medical Association have continued to be of the most cordial type, and this avenue of approach to the teachers and others engaged in public school activities has been of material advantage.

The National Congress of Parents and Teachers.—Contact has been established with the National Congress of Parents and Teachers. This important organization, which has grown rapidly during the last five years, now numbers more than a million members in its various state and local branches. It has been engaged during the last two summers in a very important campaign to secure the physical examination of preschool children; that is, of children who are to begin school life in the succeeding autumn. More than 50,000 children were examined, for the most part by the family physicians, and the examinations were followed in many cases by the correction of remediable physical defects. Just how large a percentage of the defects have been amended has not yet been reported. In order to assist in this important movement, the bureau supplied to the officials of the national congress last year 10,000 copies of a height and weight chart. This year we have undertaken to supply 50,000 copies of the blank used in recording the observations made in these examinations. Each blank carries a line at the bottom stating that it is presented by HYGEIA, the Magazine of Health of the American Medical Association. This movement to secure the medical examination of the preschool child just before he enters on school life is one of the most important steps in promoting the movement for periodic health examinations and the relations that should obtain between the family physician and the children in his clientele.

RADIO HEALTH TALKS

Radio health talks from HYGEIA have been continued each month through station KYW, Chicago. In view of the tendency of the great distributing stations to enter the commercial field and to sell their facilities for advertising purposes, it is becoming increasingly difficult to secure opportunity for the broadcasting of health talks without the payment of a fee. It is possible that station KYW may not be willing to continue the plan by which HYGEIA has addressed the public during the last three and one-half years. If this proves to be the case, it is believed that satisfactory arrangements can be made with other stations.

HEALTH EXHIBITS

Exhibits of material from the Bureau of Health and Public Instruction and from HYGEIA have been made during the year at the following meetings: Clinical Congress, Chicago, in January; National Education Association, Washington, D. C., in February; American Medical Association, Dallas, Texas, in April; Mississippi Valley Tuberculosis Association, Chicago, in June; Illinois State Medical Society, Quincy, Ill., in May; American Academy of Ophthalmology and Oto-Laryngology and the Colorado State Medical Association, Colorado Springs, in September; American Dental Association, Philadelphia, in September, and American Hospital Association, Atlantic City, in October.

CORRESPONDENCE

The number of letters received during the year by HYGEIA containing questions on health matters was 2,028, as contrasted with 1,542 for 1925. This means an increase of approximately 33⅓ per cent. The number of letters pertaining to other activities of the bureau was 3,996, as contrasted with 3,400 for 1925, an increase of 17 per cent.

PERIODIC HEALTH EXAMINATIONS

The development of interest in periodic examinations of the apparently healthy has steadily grown, as is shown by the demand for the blank published by the Association for use in these examinations. Approximately 300,000 copies of the blank have been sold, and the orders continue to average about 1,500 a week. They come from about an equal number of physicians in the smaller towns and in the larger cities.

The Manual of Suggestions has been distributed to about 65,000 physicians, state-wide distribution having been undertaken through the state medical societies in twenty-five states, and partial distribution in four states.

The reports from the secretaries of the several state medical societies at the conference held at the American Medical Association headquarters, November 20, gave evidence of the increasing interest in this subject in most sections of the country. There is still need to urge on many of the county medical societies the importance of holding discussions and demonstrations of this activity.

There is need of a suitable blank for use in the examination of children of preschool and school ages, corresponding to the blank published for use in the examination of adults. A joint committee of the American Pediatric Association and of the Section on Diseases of Children of the American Medical Association has been studying this matter for some time and it was hoped that a form would be devised which would be satisfactory for general use. It is planned to appoint a special committee to consider this matter and to draft a blank which, while reasonably comprehensive, will be brief enough for practical use.

The bureau has assembled reprints or clippings of about 100 separate articles on periodic health examinations, which are being lent in small lots to physicians who are planning to write or to speak on this subject.

MEETINGS ATTENDED

The following meetings have been attended and addressed during the year by the Executive Secretary of the Bureau of Health and Public Instruction. The subject of most of the talks was periodic health examinations, the importance of the medical and health education of the public, or, before medical groups, the service which the American Medical Association is seeking to render to its members.

Annual convention of the Chicago Dental Society, Chicago, January 28.
Annual meeting of the National Education Association, Washington, D. C., February 22.
Wilmette Women's Club, Wilmette, Ill., April 14.
Kansas State Medical Society, Kansas City, Kan., May 6.
North Dakota State Medical Society, Minot, N. D., May 26.
Mississippi Valley Tuberculosis Conference, Chicago, June 14.
Health Conservation Association of Kansas City, Mo., June 22.
Marshall County Medical Society, Marshalltown, Iowa, June 24.
Central Council for Nursing Education, Chicago, July 22.
Northern Minnesota Medical Association, Crookston, Minn., August 9.
Idaho Public Health Association, Sandpoint, Idaho, September 1.
National Tuberculosis Association, Washington, D. C., October 4.
Senior Nurses of South Side Hospitals, Mercy Hospital, Chicago, October 18.
Senior Nurses of North Side Hospitals, Grant Hospital, Chicago, October 20.
Association of American Medical Colleges, Cleveland, October 26.
National Safety Council, Detroit, October 27.
Iowa State Teachers Association, Des Moines, Iowa, November 5.
Senior Nurses of West Side Hospitals, Presbyterian Hospital, Chicago, November 10.

Council on Pharmacy and Chemistry

During the past year the Council on Pharmacy and Chemistry has made appreciable progress in its work of informing the medical profession in regard to the proprietary preparations which physicians are being constantly importuned to use. Steadily increasing numbers of physicians are availing themselves of the information placed at their disposal by the Council, either by consulting its publications or by writing letters of inquiry to the Council, and are giving consideration to new medicinal products only if they have been reported on favorably by the Council. As a result of this attitude on the part of the members of the medical profession, an increasing number of firms with meritorious new medicaments apply to the Council to have their products recognized.

In addition to reporting on proprietary medicinal products that are already on the market, the Council reports in a preliminary way on products that are in an experimental stage, when such consideration is requested by investigators who have evolved a product that in their opinion deserves clinical trial, or when the request is made by manufacturers who, before putting them on the market, desire physicians to make clinical trials of their products. Since many who have the facilities for carrying out such trials have wisely determined not to give consideration to products unless the identity and uniformity are guaranteed and unless satisfactory and promising preliminary work has been done on them, an increasing number of manufacturers have come to the Council for statements that shall establish the chemical composition and identity of the products and indicate their possible therapeutic use.

In the past, many new drugs came into vogue through overenthusiastic and premature reports of physicians, only to be tried, found wanting and added to the waste heap of discarded drugs. The practice of many editors and medical societies of insisting on a preliminary council report before accepting papers on new drugs is a safeguard against such premature propaganda. This procedure protects the profession from new drugs introduced on insufficient evidence, and may help to set right the honest but sometimes overenthusiastic physician who believes he has made an epoch-making discovery. A recent experience demonstrated the need of such preliminary reports. In this case the authors of a paper on a new product gave standards which the materials they had used did not meet. This was discovered and the publication of erroneous statements was prevented.

THE RULES OF THE COUNCIL

In passing on medicinal preparations, the Council is guided by a set of principles of rules. These rules provide that: to be acceptable, a preparation must be of known and declared composition and must be marketed in a way that guarantees its uniformity; its name must not be misleading or therapeutically suggestive, but must be a description of the nature of the product; the therapeutic claims must be in harmony with the evidence available to the Council; it must not be marketed in a way to suggest ill-advised use by the laity; it must give promise of therapeutic usefulness, must not be an unessential modification of a known and established drug, and must not be scientifically unsound and, therefore, useless or inimical to the best interests of the medical profession and of the public.

An article is accepted for inclusion in New and Nonofficial Remedies if it is found to comply with the rules, and rejected if its distributor will not or cannot make it comply with them. In general, the Council has reason to be satisfied with the support that it has received. The Council's

rules are framed in the interest of rational therapy, and the Council's action deserves the full support of the medical profession.

THE WORK AND PUBLICATIONS OF THE COUNCIL

During the past year the Council has considered rather more than the usual quota of proprietary and nonproprietary substances. Of these, about twice as many have been accepted as have been rejected. A large number remain under consideration. Of this group, a few await action on the part of the Council; a very large majority, however, are being held to await action by the proprietor or agent—chiefly either the discontinuance of claims that were found unacceptable, or the submission of further evidence in support of claims that have been challenged.

In addition to the consideration of products that are presented for acceptance, the Council spends much time each year in determining whether, in the light of new evidence that may have developed, the articles that have been accepted may be continued in the next annual edition of New and Nonofficial Remedies. The 1927 edition of the book is now in the press. Among the new preparations that it will describe are: Isacen, a product related to phenolphthalein; Ipral, a barbital hypnotic; Oscodal, a cod liver oil concentrate having a definite vitamin A and vitamin D potency; and three erysipelas streptococcus antitoxin preparations obtained by immunizing animals against the toxin of the hemolytic streptococci of erysipelas. As usual, the book has been carefully revised to bring it abreast of the most recent medical thought. A noteworthy revision is that of the general article on Lactic Acid Ferment Preparations to conform to the Council's report on the present status of bacillus acidophilus and bacillus bulgaricus therapy. This report was the result of a questionnaire sent by the chairman of the Council's committee on lactic acid ferment preparations to his associates on the committee and to others known to have studied the bacillus acidophilus problem. In consideration of the opinions received, the Council decided (*a*) to continue the acceptance, with certain provisos, of bacillus acidophilus milk, and of broth cultures and concentrates of *B. acidophilus*; (*b*) to refuse acceptance to other preparations of *B. acidophilus*, such as tablets, emulsions and candies ("blocks") unless adequate evidence is presented to show that the implantation of *B. acidophilus* may be secured through their use; and (*c*) to retain bacillus bulgaricus preparations, provided the claims for these are revised to show that they are of value only in the preparation of soured milk and that all claims for their intestinal implantation or external application are abandoned.

Another important revision of New and Nonofficial Remedies consists in the deletion according to the Council's rules of those products which by virtue of the additions to the tenth edition of the U. S. Pharmacopeia have become brands of pharmacopeial preparations and hence are not any longer within the scope of the book.

The annual reprint of the Reports of the Council on Pharmacy and Chemistry is now in the press. This book makes available the action of the Council on all products which have been denied admission to New and Nonofficial Remedies or which have been omitted from that book during the year. It contains in addition any special reports that have been authorized by the Council. Among the products that may have been reported as not acceptable for New and Nonofficial Remedies are some that are sold with erroneous statements of composition and misleading claims of action and therapeutic value, with unwarranted therapeutic claims under therapeutically suggestive names; alleged radioactive solutions which, when tested with a very sensitive electroscope, gave no signs of radioactivity; a sodium cacodylate preparation of the Venarsen type; two products recommended for use in hypertension, the first being a tissue extract preparation and the second a preparation of soluble mineral salts; a preparation combining in fixed proportions an analgesic and a hypnotic; and a mercuric chloride solution with "guaiacum solids" sold as a rheumatism cure.

The Council Reports indicate the reasons for the omission of products from New and Nonofficial Remedies. For instance: one has been omitted because it will, in effect, be used as a means of advertising an unaccepted article; another because a combination of a bismuth compound and pepsin in a stock preparation for routine use is unscientific and not in the interest of rational therapy and still another because the firm that markets it did not present convincing evidence for its superiority over sodium salicylate. Benzyl benzoate preparations have been omitted because the claims for them have not been brought into harmony with the Council's revised estimate of the drug's usefulness; and bacillus bulgaricus preparations, because the claims for them have not been brought into harmony with the Council's report on the Present Status of Bacillus Acidophilus and Bacillus Bulgaricus Therapy. Acceptable preparations of most of these articles may still be found in N. N. R.

A new (seventh) edition of Useful Drugs has been prepared and published under the direction of the Council. The book is edited by R. A. Hatcher, Ph.G., M.D., and Cary Eggleston, M.D. Useful Drugs is designed to meet the demand for a less extensive materia medica, and it supplies a brief discussion of the actions, uses and dosage of a carefully selected list of drugs. Certain drugs that are listed in the previous book have been omitted from the new edition because they were deemed to have become superfluous; others, the value of which has become established, have been added. The nomenclature has been brought into conformity with the new (tenth) Pharmacopeia, and the discussions of actions and uses have been exhaustively revised to present the latest and best results of therapeutic and pharmacologic research.

The appearance of the tenth edition of the U. S. Pharmacopeia and of the fifth edition of the National Formulary made necessary the preparation and publication of a new (third) edition of the Epitome of the U. S. Pharmacopeia and National Formulary. The book was prepared by a committee of the Council, and is now in circulation. The Epitome presents an abstract of all the material in the Pharmacopeia and National Formulary which it is necessary for a physician to have, and gives besides a brief statement of actions, uses and dosage, with an estimate of therapeutic usefulness, for each drug contained in the two books from which it is compiled.

THE MEMBERS OF THE COUNCIL

This year the Council has lost two valuable members—Dr. John Howland and Dr. Francis W. Peabody. Dr. Howland was a member whose contribution to the progress of scientific medicine is outstanding; in the deliberations of the Council he was careful to give heed to the interests of all concerned, but he was ever fearless in the cause of medicine and public health. The Council mourns his death and points to his example as an inspiration to all. Dr. Peabody was one of the younger members of the Council. His keen discrimination and judicial attitude were increasingly appreciated by all. His resignation is a distinct and serious loss to the Council.

The places of these two valued members have been taken, respectively, by Dr. W. McKim Marriott, professor of pediatrics and dean of Washington University School of Medicine, and Prof. Treat B. Johnson, professor of organic chemistry, Yale University.

THE FUTURE

For twenty-two years the work of the Council has been carried on by a body of trained men who have labored untiringly, and without remuneration, for the cause of scientific medicine. Within this period and as a direct result of the Council's efforts and of the support they have received, there has taken place a revolution in therapeutics such as was thought impossible a quarter of a century ago. But much remains to be done; and the Council's work deserves even wider recognition and acceptance. It will receive this when physicians generally come to realize and appreciate the convenience and advantage of having the services of a thoroughly experienced body of specialists adequately equipped to judge the claims for the thousand and one preparations which members of the profession are daily importuned to use, but which they as individuals cannot possibly find time to examine with proper critical attention. Every

physician should support the Council by confining his use of proprietary drugs to those found acceptable for inclusion in New and Nonofficial Remedies.

THERAPEUTIC RESEARCH COMMITTEE

An appropriation of $3,500 for the promotion of therapeutic research has been used according to the same general plan that proved useful in preceding years. Thirteen requests were received and eleven grants were made, distributed as follows:

One at $250	$ 250
Three at $200	600
Four at $150	600
Two at $100	200
One at $50	50
Total	$1,700

The subjects of these grants were as follows:

Grant 105: E. A. Doisy, professor of biologic chemistry, St. Louis University School of Medicine, $250; The Isolation and Study of the Properties, Chemical and Physiologic, of the Active Constituents of the Ovary.

Grant 106: Robert Gesell, professor of physiology, University of Michigan Medical School, $200; The Chemical Regulation of the Circulation.

Grant 107: Nora E. Schreiber, research assistant, department of pharmacology, Morley Chemical Laboratory, Western Reserve University, $200; The Excretion of Mercury Under Different Methods of Administration.

Grant 108: K. K. Chen, Ph.D., Department of Pharmacology and Toxicology, University of Wisconsin, $100; The Clinical Effects of Ephedrine.

Grant 109: A. G. Young, assistant professor of pharmacology, University of Michigan Medical School, $150; Arsenophenylglycine for Clinical Tests in Neurosyphilis.

Grant 110: E. E. Ecker, assistant professor of immunology, department of pathology, Western Reserve University School of Medicine, $200; The Action of Bacterial Filtrates on Intestinal Movements.

Grant 111: Charles W. Greene, professor of physiology and pharmacology, University of Missouri School of Medicine, $150; The Pharmacology of the Rat Uterus.

Grant 112: Victor C. Myers, professor of biochemistry, State University of Iowa, $100; The Influence of Methyl Purines on the Excretion of Uric Acid.

Grant 113: E. M. Hall, instructor in pathology, department of pathology, Stanford University School of Medicine, $150; The Action of Alcohol and Copper on the Liver.

Grant 114: P. J. Hanzlik, professor of pharmacology, Leland Stanford University School of Medicine, $150; The Standardization of Digitalis on Pigeons.

Grant 115: Clayton S. Smith, professor of pharmacology, Ohio State University, $50; The Effect of Various Drugs on General Activity.

The committee had considered making an appropriation of $1,500 for the Standardization of Ovarian Preparations. However, a study of the situation indicates that this expenditure would not be advisable at this time.

The following is a list of the sixteen papers published during 1926 under grants of the Therapeutic Research Committee:

1. Collens, W. S.; Shelling, D. H., and Byron, C. S.: The Effect of Ligation of the Hepatic Artery on Carbohydrate Metabolism, *Proc. Soc. Exper. Biol & Med.*, February, 1926. (Reprints for this have not been supplied.)

2. Cole, H. N.: Farmer, H. L., and Miskdjian, Hagope: Intramuscular Absorption of Some Insoluble Bismuth Compounds as Revealed by the Roentgen Ray, *Arch. Dermat. & Syph.*, February, 1926.

3. Doisy, E. A.; Ralls, J. O., and Jordan, C. N.: Some Chemical and Physiological Properties of the Hormone of the Liquor Folliculi, *Endocrinology*, May-June, 1926.

4. Burrows, M. T., and Jorstad, L. H.: On the Source of Vitamin A in Nature, *Am. J. Physiol.*, June, 1926.

5. Burrows, M. T., and Jarstad, L. H.: On the Source of Vitamin B in Nature, *Am. J. Physiol.*, June, 1926.

6. Ecker, E. E., and Rademaekers, A.: Studies on the Effect of Certain Toxic Substances in Bacterial Cultures on the Movement of the Intestines, *J. Exper. Med.*, June, 1926.

7. The Determination of Traces of Mercury, Nooth, H. S.; Schreiber, Nora E., and Zwicker, K. G.: *J. Am. Chem. Soc.*, July, 1926.

8. Chen, K. K., and Kao, C. H.: Ephedrine and Pseudoephedrine, Their Isolation, Constitution, Isomerism, Properties, Derivatives and Synthesis, *J. Am. Pharm. A.*, August, 1926.

9. Thienes, C. H.: Altered Responses of Smooth Muscle to Autonomic Drugs Produced by Physical and Chemical Changes, *Arch. internat. de pharmacod. et de thérap.* **31**, parts V-VI.

10. Ralls, J. O.; Jordan, C. N., and Doisy, E. A.: An Improved Procedure for the Extraction of the Ovarian Hormone and Some Chemical Properties of the Product, *J. Biol. Chem.*, August, 1926.

11. Gesell, Robert; and Hertzman, A. B.: The Regulation of Respiration, *Am. J. Physiol.*, October, 1926.

12. Tatum, A. L., and Collins, K. H.: Acute Cocaine Poisoning and Its Treatment in the Monkey (Macacus Rhesus), *Arch. Int. Med.*, September, 1926.

13. Collens, W. S.; Shelling, D. H., and Byron, C. S.: Studies of the Physiology of the Liver, *Am. J. Physiol.*, October, 1926.

14. Hanzlik, P. J., and Thienes, C. H.: Alleged Stimulation of Autonomic Nervous System in Arsphenamine Reactions, *Arch. Dermat. & Syph.*, October, 1926.

15. Hanzlik, P. J., and de Eds, F.: Permeability of the Liver to Dyes in Shock Conditions and Under the Influence of Certain Agents, *J. Pharmacol. & Exper. Therap.*, October, 1926.

16. Cole, H. N.; Gammel, J. H.; Rauschkolb, John; Schreiber, Nora E., and Sollmann, Torald: The Excretion of Mercury After Intramuscular Injection of Mercuric Bromide, Inunction and Rectal Suppositories, *Arch. Dermat. & Syph.*, December, 1926.

A number of other investigations are in press or in progress.

The Chemical Laboratory

As in past years, the Chemical Laboratory has devoted most of its time to investigation of new remedies for the Council on Pharmacy and Chemistry, to examination of nonofficial drugs, and to analysis of nostrums for the Bureau of Investigation; also, in common with other departments, it has furnished replies to many inquiries received from physicians.

WORK ON REMEDIES SOLD TO PHYSICIANS

The evaluation and standardization of new remedies intended for the medical profession is one of the most important functions of the laboratory. Unless the products are standardized, it is obvious that comparable clinical investigations cannot be reported. In this connection, ephedrine is of interest. Varying reports have been made concerning the therapeutics of the alkaloidal principle of the Chinese drug ma huang; a vast amount of experimentation has been done, much of which is in the course of preparation for publication. Yet it has practically all been done on unstandardized products. When it is realized that there are four isomers of ephedrine, each with a different activity, it can be readily appreciated how easily the commercial product may vary and, likewise, how the clinical interpretations may vary. During the past year the laboratory has elaborated standards for ephedrine hydrochloride and ephedrine sulphate, which have been accepted by three manufacturers as a means of controlling the product. This will permit future investigation to be on a more scientific, comparable basis. If the association did not have its own laboratory, it seems unlikely that newer remedies, particularly those made by more than one manufacturer, would be of the same or constant composition. As it is, the better grade of pharmaceutical manufacturers welcome the work of the laboratory in this respect and show a commendable spirit of cooperation.

The laboratory has investigated practically all of the new remedies submitted to the Council. Among these are: Ergotamine Tartrate, Homocamfin, two new barbital derivatives, Ipral and Phanodorm, many brands of Dextrose (*d-Glucose*) Ampules, Tutocaine, Gelobarin, Mesurol, Petrolagar (unsweetened), Neoreargon, Isacen, Acetarsone, Cadechol, Stearodine, etc.

During the fall the laboratory secured the collaboration of Prof. W. R. Smith, head of the department of chemistry, Lewis Institute, for a study of the Ethylene, N. N. R., offered for sale, and for elaboration of still better standards to safeguard against carbon monoxide poisoning.

The Council on Pharmacy and Chemistry has rejected many products, basing its action solely or in part on examinations made by the laboratory.

WORK FOR THE BUREAU OF INVESTIGATION

The laboratory has continued to analyze nostrums at the request of the Bureau of Investigation. As has been pointed out previously, this work is becoming more complicated. In many instances it requires more time to devise a method for

the quantitative determination of one ingredient present in the mixture than it takes for all the other determinations.

The analytic work on "patent medicines" is done carefully and thoroughly. It is gratifying to note how chemists both here and abroad appreciate the scientific quantitative statements contained in articles in THE JOURNAL. The Reports of the A. M. A. Chemical Laboratory, published annually, contain the complete details of analysis, so that others may readily follow this work.

MISCELLANEOUS

The Members and Fellows of the Association are making more and more use of the files in the laboratory. The laboratory has also been of continued service to THE JOURNAL and to HYGEIA, and has aided in the editing of the Cumulative Index.

PUBLICATIONS

During the year the laboratory published several unsigned articles on drug investigations of direct interest to physicians. The publication in THE JOURNAL of the work by Dr. Peterson, "Laboratory Method of Classification of Mercurials" (referred to in last year's report), has produced appreciative comment from a number of manufacturers and investigators, as affording a reliable index of certain properties of the organic mercury compounds. Dr. Peterson's article was widely abstracted in both domestic and foreign literature. The director contributed an article to the Fiftieth Anniversary Number of *Industrial and Engineering Chemistry* on "Standardization and Evaluation of Drugs"; this has been reprinted in other scientific publications. The Laboratory Reports for 1924 and 1925 were published during the summer. This was the largest volume of the series, and the reviews in scientific publications indicate that it has met with favorable response. As far as is known, the A. M. A. Chemical Laboratory is the only laboratory which publishes complete details of analysis. These laboratory reports serve as a guide for others engaged in such work, and also show the care with which the examinations are made.

SPECIAL STUDENTS

During the year two Fellows, Dr. Aranka Stasiak and Dr. Elmer Schulek, were sent to the Laboratory of the American Medical Association by the International Health Board of the Rockefeller Foundation, for special instruction as to methods of evaluation and analysis of remedies. The laboratory has been approached by two national organizations relative to training men in this work, and has agreed to do so only under certain stipulated conditions and with approval of the Board of Trustees.

Bureau of Legal Medicine and Legislation

TAX REDUCTION

Through the efforts of the American Medical Association, the Revenue Act of 1926 reduced the tax payable under the Harrison Narcotic Act from $3 a year to $1 a year. This is equivalent to an annual saving to the medical profession of probably more than $200,000.

THE SHEPPARD-TOWNER MATERNITY ACT

On Jan. 13, 1927, the Senate passed an act extending the Sheppard-Towner maternity law for two years, after amending the act so as to provide that the law should be void at the expiration of the period named. The House of Representatives accepted the Senate amendment and the President approved the act. The Sheppard-Towner maternity act will therefore expire on June 30, 1929. The act itself was limited to a period of five years and normally would have expired on June 30, 1927. After its enactment, however, those charged with its administration proclaimed it to be permanent legislation, and they seem to have organized federal and state activities under it on the presumption that the act would continue in force indefinitely. It was the fact that the service had been so organized that seemed to render it necessary that two years' grace be allowed to permit the winding up of affairs. Pamphlets prepared by the Bureau of Legal Medicine and Legislation, pointing out the fallacies of the Sheppard-Towner maternity act, were widely circulated and were read in the Senate in the course of the debate on the bill extending the act. The columns of THE JOURNAL and of the AMERICAN MEDICAL ASSOCIATION BULLETIN were freely used to enlist the support of the profession.

NATIONAL PROHIBITION ACT

Quantitative Limitations on the Medicinal Use of Alcohol.— The validity of the provisions of the National Prohibition Act that limit the quantity of liquor that may lawfully be prescribed was affirmed by the United States Supreme Court, Nov. 29, 1926, by a five to four decision. Any removal or enlargement of such limitation can now come only from Congress. For a discussion of this matter, reference should be made to the report of the committee appointed by the Board of Trustees to cooperate with the Assistant Secretary of the Treasury in charge of the enforcement of the National Prohibition Act.

Promulgation of Regulations.— The National Prohibition Act empowers the Commissioner of Internal Revenue to make such regulations as may be necessary to carry it into effect. Persons who are to be governed by such regulations are not entitled to any notice of the commissioner's intention to promulgate them or to the opportunity to be heard. The regulations promulgated may take effect instantly on their approval by the Secretary of the Treasury without notice and opportunity for adjustments to meet the conditions they create. The law does not specify how they shall be published, and in fact does not require them to be published at all. What is true with respect to regulations promulgated under the National Prohibition Act is equally true of regulations promulgated under the Harrison Narcotic Law. The result is that a physician cannot know from day to day the regulations by which he is supposed to be governed.

With a view to the correction of this condition, the Board of Trustees has approved the draft of a bill prepared by the Bureau of Legal Medicine and Legislation to safeguard the rights of physicians with respect to the promulgation of regulations under the National Prohibition Act, the Harrison Narcotic Law, and all similar federal acts that now exist or that may hereafter be passed. The draft provides that notice be given by publication of intention to promulgate any regulations that are to be promulgated for the government of the people generally and that an opportunity be afforded for filing briefs and for hearings; that such regulations as may be promulgated be duly published, and that an adequate time be allowed within which persons who must conform to the regulations may adjust their affairs so as to do so; and that all regulations promulgated be duly reported to Congress annually and thereafter be officially published so as to be accessible to the people of the country generally and particularly to lawyers and to the courts. These requirements seem reasonable and necessary. It is recommended that the House of Delegates endorse the principles embodied in the proposed bill and authorize action looking toward their enactment into law.

Production and Distribution of Medicinal Liquor

If the medicinal liquor available when this report was written continues to be used at the rate now prevailing, it is officially estimated it will last about five years. Properly matured whisky and brandy require more than four years for manufacture. Immediate action was necessary, therefore, to prevent gradual but prohibitive increase in prices as the available supply approached the vanishing point, and to insure an adequate supply thereafter. Several bills were introduced in Congress to accomplish these ends. The final result was a bill[1] authorizing the manufacture of medicinal spirits, and their importation if necessary, under a rigid system of licensing by the Secretary of the Treasury. The bill provided for a centralization of the control of existing

1. H. R. 17130, A Bill To conserve the revenues from medicinal spirits and provide for the effective Government control of such spirits, to prevent evasion of taxes, and for other purposes.

supplies of medicinal spirits and for bottling them under government supervision, after tests to determine their purity. To prevent tampering with packages after they leave the warehouse, the bill authorized the Secretary of the Treasury to require delivery direct from the warehouse to the retail druggist. It required that all whisky and brandy bottled under the act be dispensed in original sealed packages, except as the Secretary of the Treasury might otherwise permit by regulation. A system was established by the bill whereby the Secretary of the Treasury might at any time ascertain what it cost the manufacturer to make and distribute medicinal spirits, and the cost price to the retail druggist. If any person authorized to sell medicinal spirits at retail charged more than their fair market value, the Secretary of the Treasury might revoke such authorization. This bill seemed to the Board of Trustees to be based on the several principles stated in the resolution adopted by the House of Delegates in 1922.[2] To the extent that it did so, the Board of Trustees approved the bill.

NARCOTICS

Amendment of the Harrison Narcotic Law.—Bills were introduced in Congress, with the approval of the Treasury Department, to amend the Harrison Narcotic Law. These bills proposed to empower collectors of internal revenue to deny to physicians the right to administer, dispense and prescribe narcotics, by refusing registration under the Harrison Narcotic Law to such physicians as the collectors might believe to be narcotic addicts. The bills themselves undertook to deprive physicians of their right to employ narcotics in the practice of their profession by empowering and compelling collectors to deny registration for from one to two years to every physician convicted of any violation of the Harrison Narcotic Law, no matter how trivial and technical the violation might have been. Pharmacists were to be required to refuse to compound prescriptions containing narcotics whenever the pharmacist thought that the prescribing physicians had not issued such prescriptions in the proper course of professional practice. The bill undertook to forbid absolutely the ambulant treatment of narcotic addicts, no matter what the laws of the state might require and regardless of the inadequacy of hospital and sanatorium accommodations for such persons. Additional duties were to be imposed on physicians with respect to record keeping. The secretary of the Bureau of Legal Medicine and Legislation appeared before the subcommittee of the Committee on Ways and Means of the House of Representatives having the matter in charge and argued against the bill. A supplementary argument was printed later in the AMERICAN MEDICAL ASSOCIATION BULLETIN, reprints of which were widely circulated. The bill was not reported out of either the Senate or the House committee to which it was referred.

Promulgation of Regulations Under the Harrison Narcotic Law.—The arbitrary way in which legislation may be formulated and promulgated under the Harrison Narcotic Law has been commented on in the discussion of the formulation and promulgation of regulations under the National Prohibition Act. Legislation to correct the situation is there discussed.

Model State Narcotic Law.—The Bureau of Legal Medicine and Legislation is cooperating with a committee of the National Conference of Commissioners on Uniform State Laws with a view to the preparation of a model state narcotic law that will satisfy the views of the medical and legal professions. In that connection the bureau is undertaking a study of existing state narcotic laws and the methods of enforcing them.

REORGANIZATION OF FEDERAL HEALTH ACTIVITIES

The bill to provide for the coordination of public health activities of the federal government (H. R. 10125), the principles of which were approved by the House of Delegates last year, was not reported out of the committee to which it was referred.

LYE LEGISLATION

A bill to regulate the distribution of lye and other caustic substances in interstate and foreign commerce, in packages suitable for household use (S. 2320), introduced into Congress at the request of the American Medical Association, was enacted by Congress. One state, Virginia, enacted a law in 1926, to regulate the distribution of lye and other caustic substances in harmony with the model law proposed by the American Medical Association. This matter is discussed further in the report of the Committee on Lye Legislation.

EXPERT TESTIMONY

A resolution stating the principles that in the judgment of the House of Delegates should govern the introduction and presentation of expert testimony was adopted by the House of Delegates in 1926. Pursuant to that resolution, a copy of it was sent to the American Bar Association. Subsequently Dr. George E. Follansbee of Cleveland, and Dr. Woodward, conferred with the Committee on Jurisprudence and Law Reform of the American Bar Association relative to the matter. As a result, an effort is now being made to formulate a bill representing the views of the American Medical Association and the American Bar Association authorizing the appointment of experts by the courts and regulating the introduction of their testimony.

BASIC SCIENCE ACTS

To promote the establishment of a single standard of professional knowledge and skill for all classes who assume to treat the sick, the Bureau of Legal Medicine and Legislation drafted a form for a basic science act along lines suggested by the acts passed in Wisconsin and Connecticut. This draft was published in the AMERICAN MEDICAL ASSOCIATION BULLETIN in January, 1927, and reprints have been widely distributed. Basic science acts find their justification in the fact that a knowledge of anatomy, physiology, chemistry, pathology, bacteriology and diagnosis is the basis of all rational attempts to heal the sick, no matter what method of healing may be employed, and that the sciences named are securely beyond the reach of the dogmas of any healing cult. Basic medical practice acts provide, therefore, for the determining by nonsectarian, nonmedical examining boards of the knowledge of the sciences named, possessed by the applicants who seek licenses to practice the healing art in any form. Applicants who demonstrate to the satisfaction of basic science examining boards adequate training in such sciences are certified to the proper professional examining boards. Each professional board determines whether the applicants certified to it have the preprofessional and professional education required of practitioners of the particular mode of healing represented by such board. Applicants duly certified by the basic science examining board and having proper preprofessional and professional training are then examined by the professional examining board to determine their professional qualifications. Not until they have been found qualified by the basic science examining boards and the professional examining boards are applicants licensed to practice the healing art in any form. The plan seems calculated to prevent such licensing as is now possible of applicants who are ignorant of even the most elementary principles on which all healing rests.

LEGISLATIVE REPORTING SERVICE

If there is to be intelligent action by the medical profession with respect to federal and state legislation concerning matters of interest to physicians, the profession must have at its command adequate knowledge, not only of the laws that have been enacted, but also of the laws that are from time to time proposed. Efforts have been made by the Bureau of Legal Medicine and Legislation during recent years to keep informed with respect to legislation proposed in the several states, through the state medical associations. In some states, excellent service has been rendered. In others, how-

2. Resolved, That the House of Delegates of the American Medical Association, in convention assembled, representing a membership of over 89,000 physicians, appeals to the Secretary of the Treasury and to the Congress of the United States for relief from the present unsatisfactory conditions, and recommends that provisions be made for supplying bonded whisky, for medicinal use only, at a fixed retail price to be established by the government.—Proceedings, House of Delegates, 1922, page 38.

ever, it has been mediocre or poor, and in a few cases it has been impossible to obtain any service whatever. In view of the importance of the matter, arrangements have now been made whereby prompt reports of all bills of interest to the medical profession introduced in Congress and the several state legislatures will be furnished and copies of such bills supplied, through a national organization rendering service on a commercial basis. The more important legislation thus reported has been announced from week to week in the news columns of THE JOURNAL, bringing such legislation in that way to the notice of the profession in each of the states interested. Letters giving more detailed information have been promptly forwarded to the president and secretary of the state associations interested, and, when so requested, to the chairman of the legislative committee. This will stimulate, it is believed, the interest of the profession in legislation of medical interest and facilitate the organization by the state medical associations of professional sentiment with respect to such matters. It will serve to acquaint the entire medical profession of the nature of the legislation that is being sought throughout the entire country that may affect the health of the public and the interests of the profession, favorably or unfavorably. The gathering of such information by the Bureau of Legal Medicine and Legislation will place that bureau in a better position than ever before to inform state medical associations as to the trend of legislation and to advise with respect to it.

FEDERAL INCOME TAX: DEDUCTIBILITY OF EXPENSE OF ATTENDING CONVENTIONS

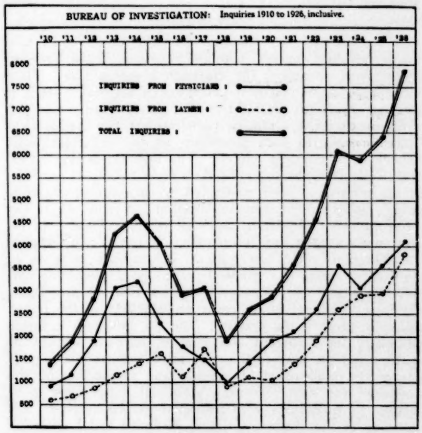
The Commissioner of Internal Revenue persists in his denial of the right of a physician to deduct, in the computation of his federal income tax, expenses incurred in attending meetings of medical organizations. The commissioner has permitted an electrical engineer who attended a committee meeting of a technical organization of which he was a member to deduct traveling expenses incurred in doing so. Only recently, he has authorized corporations to deduct traveling expenses incurred by their representatives in attending meetings of the Chamber of Commerce of the United States and of the International Chamber of Commerce. He denied the right of a minister to deduct the expenses of attending a convention of the denomination to which he belonged, but his ruling was reversed by the Board of Tax Appeals. The commissioner held that the expenses of a physician incurred in attending meetings of medical organizations were not deductible and his ruling was affirmed by the Board of Tax Appeals. But in that case the physician based his claims solely on evidence tending to show that attendance was necessary to increase his professional acquaintance and thus to increase his practice, and the case was submitted without argument on behalf of the physician. It is impossible to discover any principle underlying the commissioner's interpretation of the law, and so far as is known his ruling with respect to the deductibility of physicians' traveling expenses was made without any effort to inform himself as to the facts. It appears improbable, however, that the commissioner can be induced to recede from the attitude he has arbitrarily assumed with respect to the matter. Relief probably lies in an appeal to the Board of Tax Appeals properly presented and properly argued. The Bureau of Legal Medicine and Legislation is ready to cooperate with any member of the Association who takes such an appeal and who has adequate evidence to show the nature and extent of the expenses of attending the meeting of one or more medical organizations and the professional purpose of such attendance.

MEDICAL DEFENSE

The Bureau of Legal Medicine and Legislation made its usual annual survey of the medical defense activities of the several state medical associations. The results have been published in the AMERICAN MEDICAL ASSOCIATION BULLETIN. The returns for the calendar year of 1925 seem to indicate a decrease in the frequency of claims against physicians, based on alleged malpractice. Returns for the year of 1926 are not yet available.

Bureau of Investigation

One of the best indexes of the activities of the Bureau of Investigation is the annual amount of correspondence. The most important work of the bureau is not that of preparing weekly articles for THE JOURNAL of the American Medical Association, nor occasional articles for HYGEIA, but that of furnishing information to physicians and the public. The number of inquiries received and answered by the bureau during 1926 was considerably larger than ever before. During 1925, the bureau answered 2,866 letters from laymen; in 1926, it answered 3,644 letters, an increase of about 27 per cent. During 1925, the bureau answered 3,541 letters from physicians; in 1926, it answered 4,112, an increase of about 16 per cent. In other words, while, during 1925, 6,407 letters were written to laymen and physicians combined, during 1926, there were 7,756 such letters sent out, a total increase of about 21 per cent.



Inquiries answered by Bureau of Investigation.

The work of the bureau during the past year has differed only in quantity from that of previous years. More newspapers today are catering to the advertising accounts of "patent medicine" exploiters and quacks than during the period following the war, when advertising was easy to obtain. As a result, the Associated Advertising Clubs of the World, both through its National Better Business Bureau and also through the various component Better Business Bureaus that are scattered over the country, has called on the Bureau of Investigation more extensively during the past year than ever before for information with regard to medical "copy."

Teachers and pupils in schools and colleges continue to call on the bureau for data on the "patent medicine" evil and quackery. The paragraphs or chapters in certain school and college textbooks on general science, civic science, civic biology, hygiene, etc., dealing with the influence of the nostrum evil on the public health are responsible for the interest shown by students and teachers in this subject. The material facts used by the authors of these textbooks have, in many instances, been furnished by the Bureau of Investigation.

As indicated by the number of letters received, the physician in the field has made good use of the services of the bureau during the past year. Especially has he taken advantage of the bureau's loan service of lantern slides for illustrating talks on the nostrum evil and quackery.

An especially large number of inquiries have been received during 1926 from the hard of hearing, and from those who are interested in the problems of the deaf and deafened. This

special interest is due to the activities of the American Federation of Organizations for the Hard of Hearing, which has made it be known that the Bureau of Investigation is able and willing to furnish information to any who are interested in the various nostrums and quackish devices sold for the alleged cure of deafness.

The demand for the educational posters prepared by the bureau has been unprecedentedly large. The call has been especially heavy for those illustrating "Vitamins in Foods," "Food-Iron" and "Food-Calcium." There has also been a brisk demand for the pamphlets prepared and issued by the bureau, as well as for the two volumes of "Nostrums and Quackery."

There have been many invitations for the director of the bureau to deliver addresses on various phases of quackery. While it has been impossible to accept all of the invitations offered, the following engagements have been filled:

South Bend, Ind.—Illustrated talk on "The Nostrum and the Public Health," given before the St. Joseph County Medical Association, in open meeting, Feb. 24, 1926.

South Bend, Ind.—Illustrated talk on "The Nostrum and the Public Health," given before the student body of Notre Dame University, March 8, 1926.

Chicago.—Talk on "Nostrums and Quackery," given before the Chicago Woman's Aid, March 11, 1926.

Chicago.—Radio talk on "Medical Charlatans," given under the auspices of the University of Chicago over WMAQ, March 26, 1926.

Grand Rapids, Mich.—Talk on the work of the Bureau of Investigation, given before a meeting of the officers and county secretaries of the state of Michigan, March 30, 1926.

Galesburg, Ill.—Illustrated talk, "White Pills for Green People," given before the students of Knox College, May 6, 1926.

Philadelphia.—Illustrated paper, "Deafness Cure Quackery and Pseudo-Medicine," given at the Seventh Annual Meeting of the American Federation of Organizations for the Hard of Hearing, June 24, 1926.

Chicago.—Illustrated talk on "Nostrums and Quackery," given before the Brotherhood of Moreland Lutheran Church, Oct. 26, 1926.

Milwaukee.—Paper on "The Patent Medicine and the Public Health," given before the Wisconsin Teachers' Association Convention, Nov. 4, 1926.

Chicago.—Illustrated talk, "Mrs. Gullible's Travels in Cosmetic Land," given before the Woodlawn Woman's Club, Nov. 30, 1926.

Cincinnati.—Informal talk on the work of the Bureau of Investigation, given before the student body of the College of Medicine, University of Cincinnati. Also illustrated paper on "Deafness Cure Quackery and Pseudo-Medicine," read at a joint meeting of the Academy of Medicine, the Otolaryngological Society and the Cincinnati League for the Hard of Hearing. Both, Dec. 13, 1926.

Council on Physical Therapy

The Council on Physical Therapy was permanently organized in January, 1926, with nine members. Since that time, at the instance of the Council, the Board of Trustees has increased the personnel to eleven, electing as the new members Dr. H. B. Williams, professor of physiology at Columbia University, and Dr. Frank B. Granger, instructor in physical therapy in the Graduate School of Medicine of Harvard University. It was not until June, however, that it became possible to secure an executive secretary of the Council, in the person of Mr. H. J. Holmquest, a physicist and teacher of experience.

Dr. Walter B. Cannon of Boston, one of the original members of this Council and one who has served the Association faithfully in various capacities, has found it necessary to curtail his work, and resigned as a member of the Council in December, 1926. Dr. Walter E. Garrey, professor of physiology in Vanderbilt Medical School, was elected by the Board of Trustees to succeed Dr. Cannon.

The Council on Physical Therapy, having to deal with many problems that are altogether new, and working in a field that has been inadequately explored from the scientific point of view, has proceeded slowly and with conservatism. Solutions to some of the problems confronting the Council are not yet apparent, but these problems are receiving earnest consideration, and as needed facts are developed and applied, they will, it is hoped, be satisfactorily worked out. The methods and procedures which have long been satisfactorily used by the Council on Pharmacy and Chemistry will, in general, be followed by the Council on Physical Therapy. The rules now in effect were adopted after long and thorough consideration. These rules will be observed primarily with a view to the protection of the medical profession and the public against fraud, undesirable secrecy, and objectionable advertising in connection with the manufacture and sale of apparatus for physical therapy and in connection with methods used in that field. It is believed that these rules will serve to enable manufacturers to standardize their products.

Incidentally, it may be remarked that almost without exception these manufacturers have made known their desire to cooperate with the Council in placing physical therapy on a rational basis, and this cooperation will be of great assistance to the Council.

Committees have been appointed as follows:

1. Committee on present status of physical therapy.
2. Committee on education in physical therapy and biophysics.
3. Committee on organization.
4. Committee on nomenclature and definitions.
5. Committee on standardization.

Initial reports of some of these committees have been approved and published, and others will appear in THE JOURNAL from time to time. The reports that have already been published have been highly commended by members of the profession, by manufacturers and by individual laymen. The Committee on Education in Physical Therapy and Biophysics is preparing comprehensive reports on the status of teaching in physical therapy in medical schools of the United States. The Committee on Nomenclature and Definitions is preparing a glossary of the terms generally used in physical therapy. The terms to be defined are of two classes: (1) scientific terms and units which have been accurately defined by international scientific congresses; (2) terms peculiar to physical therapy. In defining the latter, the Committee on Nomenclature will be guided largely by accepted usage whenever possible.

The Committee on Standardization is considering the possibilities of standardization of physical therapy apparatus, with a view to the possible assurance that devices manufactured and sold to the medical profession will deliver the particular physical energies which they are supposed to deliver, and also with a view to minimizing the hazards of physical therapy apparatus.

It has been decided to publish a series of articles on the various methods in use in physical therapy. In these articles an effort will be made to include all that is definitely known concerning the value and the limitations of the various modes of treatment in this field. These articles will be prepared with the advice of the best informed scientific men in the United States.

The Council will not restrict its work to the consideration of therapeutic apparatus and methods, but will undertake the investigation of such correlated subjects as may be thought to be of major importance. For example, studies are now being conducted to determine the degree to which various materials advertised as pervious to ultraviolet rays will transmit such radiation. The results of these studies will be incorporated in a Council report to be published in THE JOURNAL, and it is thought that such information will be of great value to practicing physicians, medical schools and hospitals, as well as to the general public.

The Council on Physical Therapy has taken a definite stand in opposing the sale to the public of certain apparatus for which claims of therapeutic value have been made. It is interesting to note that this stand of the Council has been enthusiastically approved by some of the leading manufacturers of physical therapy devices.

Library

The work of the library also has been extended.

The package library service, established nearly three years ago, is growing in popularity, as well as in quantity and in quality of material included in the loan packages. Five hundred and ninety-two packages were distributed in 1926, and most of the physicians who received this service have

expressed their appreciation. A majority of the requests for this service come from physicians in small towns.

The periodical lending service of the library, through which current medical journals are provided on request for short periods of time, also has been considerably extended. A total of 2,651 periodicals were sent out, representing an increase of 624 over the preceding year.

More than 2,200 individual reference questions and bibliographies were prepared by the library for members and Fellows of the Association.

During the year, eighty-five indexes were prepared in this department for the various publications, in addition to the compilation of material for the QUARTERLY CUMULATIVE INDEX.

More than 700 periodicals now come to the Association Library. The domestic periodicals regularly received number 205, and the foreign journals, 350. Many of these periodicals are received through exchange with journals issued by the Association.

From the employees' library, maintained in connection with the Association's medical library, 4,307 books were borrowed—nearly twice as many as were borrowed in 1925. There were seventy-seven new borrowers among the employees of the Association who took advantage of this service during the year.

The Scientific Exhibit

The Scientific Exhibit at Dallas was an outstanding feature of the annual session. The amount of material exhibited was even larger than that at the previous session at Atlantic City, and its scientific quality was of a very high order. A gratifying number of papers read before the sections were correlated with exhibits. Particularly noteworthy were the excellent demonstrations given by a large number of leaders in the field of investigative medicine.

The Section on Dermatology and Syphilology again had an excellent exhibit, dealing with cancer. The committee in charge, composed of the late Dr. I. L. McGlasson, Dr. E. D. Crutchfield and Dr. Fred Weidman, deserve praise for the systematic presentation of the subjects by the investigators who collaborated. Two special exhibits, authorized by the Board of Trustees, were always the centers of groups of interested visitors. The fresh pathologic exhibit received surgical and necropsy material from Dallas, supplemented by material from other cities, and by specimens received from the packing house at Fort Worth; the material was admirably demonstrated by Drs. George T. Caldwell and Ozro T. Woods. The Exhibit on Immunology was particularly instructive, and the demonstrations were of practical, everyday interest. School children were present twice each day for demonstration of Schick and Dick tests. The committee in charge was composed of Drs. H. R. Wahl, Esmond R. Long, R. W. Lamson, J. H. Black and O. B. Nesbit. A coordinate exhibit on smallpox vaccination was given under the auspices of the United State Public Health Service by Dr. J. P. Leake. At stated intervals Dr. Leake showed the various types of takes, 120 students having been vaccinated a number of days previous to the opening of the session.

During the Dallas Session the Committee on Scientific Exhibit arranged a conference with a number of surgeons interested in the treatment of fractures. As an outgrowth of the conference, the executive committees of the Section on Surgery, General and Abdominal, and the Section on Orthopedic Surgery met with the Committee on Scientific Exhibit, and a plan was worked out for a cooperative fracture exhibit and a symposium on fractures for the Washington Session. The Section on Dermatology and Syphilology and the Section on Urology appointed committees for section exhibits for the Washington Session, the latter in cooperation with the American Social Hygiene Association.

As the Scientific Exhibit increases in size, it also becomes more complicated, necessitating, from time to time, changes in the rules and regulations. The exhibitors, however, have shown a commendable spirit of cooperation and appreciate the fairness of having these regulations rigidly enforced.

As a tribute to the excellence of the material at Dallas, it might be pointed out that the Committee on Awards was able to make its decision only after a considerable expenditure of time, and then with great difficulty. The report of this committee was published in THE JOURNAL, May 1, 1926, pages 1366-1367. The total number of exhibits was seventy-seven, and the number of participants, 145.

MOTION PICTURE THEATER

The Motion Picture Theater continues as a popular adjunct to the Scientific Exhibit. The method of operating strictly on schedule without vacant periods was again carried out at Dallas. Thirty-four speakers were scheduled for seventy-five periods. The talks, which were of practical interest, dealing mainly with diagnosis and treatment of disease, were exceedingly well attended. At times the seating capacity of the theater (800) was overtaxed. In this connection, the policy of the Committee on Scientific Exhibit not to permit the exhibition of films dealing with purely surgical technic seems justified. The surgical topics have been ably handled by the aid of lantern slides, and the consensus seems to be that talks so illustrated have been of greater benefit to the listeners than if motion pictures had been employed. At Dallas about 40 per cent of all the talks were illustrated by motion pictures and 60 per cent by lantern slides.

The Committee on Scientific Exhibit wishes to express again its appreciation for the assistance obtained from the Advisory Committee and from the section secretaries, for which grateful acknowledgment is hereby made.

Report of Committee to Cooperate with Commissioner of Internal Revenue and Secretary of the Treasury

The Board of Trustees submits herewith the report of the Committee to Cooperate with the Commissioner of Internal Revenue and the Secretary of the Treasury:

To the Board of Trustees:

Your committee appointed by the Board of Trustees under the Chalmers Resolution adopted by the House of Delegates in 1925, to formulate certain regulations to be placed in effect in the event of success of the Lambert appeal to the Supreme Court of the United States, was enlarged under a resolution in 1926, and your Board appointed Dr. Southgate Leigh and Dr. Tom B. Throckmorton, so that the committee now consists of the above named gentlemen, Dr. Alexander Lambert of New York, Dr. Paul D. White of Boston and Dr. William H. Mayer of Pittsburgh.

To this committee was also referred by your Board of Trustees various matters pertaining to the alcohol situation.

Through correspondence, the committee, with the assistance of Dr. W. C. Woodward, carried on certain activities which will be detailed in part below.

You are aware that the Supreme Court of the United States, by a vote of 5 to 4, refused the appeal of Dr. Lambert, which appeal was directed at the principle of Congress regulating the practice of medicine by limiting the right of the physician to prescribe one pint of whisky in ten days. An examination of the opinion of Justice Brandeis reveals that he placed great stress on the resolution passed by the House of Delegates in 1917, which resolution said, in turn, that "alcohol has no therapeutic value and its use as a therapeutic agent should be discouraged." Your committee realizes that, the Supreme Court of the United States having spoken, the entire matter is a closed incident. Your committee, however, feels that the Board of Trustees should recommend to the House of Delegates that, in the future, no resolution pertaining to the therapeutic value of anything should originate on the floor of the House of Delegates and that no committee report empowering any such resolution should ever be presented until it has been considered by the Council on Scientific Assembly, which may enlist the Council on Pharmacy and Chemistry in its deliberations. In the opinions of the various judges leading up to the Supreme Court decision, this question has been categorically referred to, by reason of this resolution passed in the closing moments of a wartime session. The great principle involved and the possibility of further limitation of the practice of medicine by Congress are points which may easily arise at any time from similar

action. The committee, therefore, strongly urges that the Board of Trustees call this matter to the attention of the House of Delegates forcefully.

The chairman of your committee has been importuned by Dr. Samuel Lambert of the Association for the Protection of Constitutional Rights, and the recent appellant before the Supreme Court, to have the American Medical Association join in the application for a writ of error for reargument of the recently decided case, since in Justice Brandeis' opinion certain misstatements of fact are present. Dr. Lambert has further recommended that the American Medical Association enlist the assistance of Mr. Joseph Auerbach of New York in arguments before the legislative committees relative to further legislation intended to remove the restriction in section 7 of the Volstead Act. Your committee feels that the American Medical Association has lent its assistance to the limit as amicus curiae in the recent case and that the association with the group recently defeated is not desirable in any legislation that it may seek to introduce to remove this restriction of the right of a physician to practice medicine. We therefore recommend that any action taken should be independent.

Your committee has before it Senate bill 4915, introduced by Senator Hawes of Missouri, which bill is aimed at this same portion of the Volstead Act. Our reaction to this bill is that it does not contain sufficient specific limiting regulations and would place a burden on the medical profession which it should not be asked to assume. We therefore recommend that an attempt, which is already under way, to draft a bill which shall include an amendment to the Volstead Act to remove the pint in ten days limit, provide regulations for license to prescribe and reasonable limitations, shall be prepared by this committee, with Dr. Woodward's approval and approved by your Board of Trustees at its February meeting, be introduced into Congress. This would seem the only answer to the situation as to the spirit of the several resolutions. We were instructed to prepare such legislation and such legislation was held in abeyance, pending the decision recently handed down, on advice of counsel.

Your committee, through its chairman, consulted with General Andrews, with Dr. Woodward present, with reference to the introduction into Congress of the recently introduced government bill for the establishment of a corporation to manufacture medicinal whisky. As our Board of Trustees and House of Delegates are previously on record as recommending government control of all medicinal whisky and the purchase thereof, the chairman of your committee, with subsequent notification to the committee, agreed with General Andrews that the American Medical Association would support this legislation. Our previous attempt to have such legislation passed was negatived by President Coolidge and Secretary Mellon by reason of the fact that these gentlemen are instinctively opposed to the government entering into business. Dr. Woodward appeared before the Congressional Committee on Jan. 11, 1927, in support of the administration measure to bring about the forming of this corporation.

Certain other matters of minor import have been handled by your committee in conformity with the policies laid down by the Board of Trustees.

Your committee again urges that it be empowered to prepare such legislation as hereinbefore described, and that it be presented to your Board of Trustees at its February meeting for approval, and that such legislation be introduced into Congress.

Respectfully submitted,

W. H. MAYER, Chairman.

The personnel of this committee is as follows: Drs. William H. Mayer (chairman), Pittsburgh; Alexander Lambert, New York; Paul D. White, Boston; Southgate Leigh, Norfolk, Va., and Thomas B. Throckmorton, Des Moines, Iowa.

In view of what has transpired in the legislative halls at Washington with respect to the governmental control of medicinal liquor, the Board of Trustees feels that it should refer this report to the House of Delegates without recommendation.

REPORT OF COMMITTEE ON SCIENTIFIC RESEARCH FOR 1926

NEW GRANTS

Since the last report, twenty-one new grants (83-103) have been made.

In addition to the appropriation made by the Trustees for 1926, there was placed at the disposal of the committee $1,140.51, which sum constitutes the Charles A. Brant Fund donated to the American Medical Association for medical research. On recommendation of the committee, the Charles A. Brant Fund has been devoted to research on the clinical aspects of host-parasite relations in man and associated animals, under the direction of R. W. Hegner, professor of protozoology, School of Hygiene and Public Health, Johns Hopkins University (see Grant 101).

All the new grants, except three, have been paid in full, and on the basis of reports from grantees it is believed that the work generally is in a satisfactory condition. Only three grants have been made for pay to grantees; in all other cases the grants were made for necessary expenses, supplies or technical assistance that could not be provided from the means at hand.

NEW GRANTS

Grant 83: Roy L. Moodie, professor of anatomy in the College of Medicine in the University of Illinois, $65 for excess cost of illustrations of article on paleopathology.

Grant 84: Harry L. Huber, clinical associate in medicine in the University of Chicago, $1,200 for continuation (see grant 76) of work on the chemical and immunologic properties of the pollens concerned in hay fever and allied conditions.

Grant 85: Barnett Sure, professor of chemistry in the College of Agriculture of the University of Arkansas, $300 for study of a dietary factor concerned in the secretion of milk.

Grant 86: P. E. Lineback, professor of anatomy, Emory University, Georgia, $250 for a study of the macula lutea and fovea centralis with the object of establishing, if possible, a clearer morphologic foundation for binocular vision.

Grant 87: Emery R. Hayhurst, professor of hygiene and head of the department of public health in the University of Ohio, $1,000 toward the expenses of an investigation of pulmonary silicosis, largely by means of radiography, among grindstone and cutstone workers in northern Ohio.

Grant 88: Emery R. Hayhurst, professor of hygiene, Charles B. Morrey, professor of bacteriology, and Dana J. DeMorest, professor of metallurgy, University of Ohio, $500 for expenses of an experimental study of the effect of breathing combustion products of carbonaceous fuels on the susceptibility to pneumonia.

Grant 89: Carl W. Apfelbach, instructor in pathology in the University of Chicago (Rush Medical College) and resident physician in the Presbyterian Hospital, and Edwin M. Miller, assistant clinical professor of surgery, $500 toward the expenses of a study of the effects of the destruction of glomeruli in the kidney of the dog.

Grant 90: Samuel A. Matthews, professor and head of department of physiology, pharmacology and therapeutics in the school of medicine of Loyola University, Chicago, $150 for materials for the study of the antagonistic action between magnesium salts and the parathyroid hormone.

Grant 91: A. W. Meyer, professor of anatomy in Stanford University, $1,200 for continuation (see grant 78) of work on the tissue changes in experimental scurvy.

Grant 92: H. W. Manwaring, professor of bacteriology and experimental pathology in Stanford University, $750 for expenses of investigation of fundamental problems of anaphylaxis and immunity.

Grant 93: Victor C. Jacobson, professor of pathology, Albany Medical College, $1,200 for further (see grant 72) and experimental study of endometriosis and allied problems.

Grant 94: Robert L. Benson, professor of pathology in the school of medicine in the University of Oregon, $800 toward the expenses of an experimental study of arteriosclerosis.

Grant 95: Nicholas W. Popoff, volunteer worker under Prof. A. A. Maximow in the department of anatomy in the University of Chicago, $240 for work on the histogenesis of the thymus in vitro.

Grant 96: Aldred Scott Warthin, professor of pathology, and George R. LaRue, associate professor of zoology and director of the biologic station, University of Michigan, $2,000 for an investigation of *Dibothriocephalus latus* infection, particularly in Michigan.

Grant 97: Bernhard Steinberg, department of pathology, Western Reserve University, $400 for experimental study of survival from peritonitis.

Grant 98: Samuel A. Matthews (see grant 91), $300 for continuation of study of parathyroid hormone.

Grant 99: Roy H. Turner, department of medicine, Tulane University, $300 for a study of the intestinal microbiology in pellagra and sprue.

Grant 100: Fred T. Rogers, professor of physiology, Baylor Medical College, Dallas, Texas, $100 for a study by means of the roentgen ray of the motility of the stomach during hunger.

Grant 101: Under the direction of R. W. Hegner, professor of protozoology, School of Hygiene and Public Health, Johns Hopkins University, for work on the clinical aspects of host-parasite relations, man and his associated animals with their protozoan parasites, $1,140.51, which sum constitutes the Charles A. Brant Fund, donated to the American Medical

Association for medical research by Dr. R. O. Raymond of Flagstaff, Ariz.

Grant 102: Helen Bourquin, professor of physiology, University of South Dakota, $250 for work on the substances responsible for the diuresis of diabetes insipidus.

Grant 103: Robert O. Loebel, Russell Sage Institute of Pathology, Cornell University Medical College, New York, $855 for work on the gaseous exchange of normal and malignant cells.

PRESENT STATUS OF WORK

The status of work in progress under new and previous grants may be summarized briefly as follows:

Grant 39, 1919: $1,000 to E. O. Jordan, University of Chicago, for review of the literature on the influenza epidemics for 1918-1919, with synopsis of the results of value. This work, undertaken at the invitation of the committee on the recommendation of Dr. George H. Simmons, is now ready for publication in book form. It is believed that the cost of publication will be repaid to a considerable extent from the sales.

Grant 52, 1921: $400 to William H. Welker, University of Illinois, for the chemical study of bacterial proteins. The results of this work have been published and full account of the expenses has been rendered, with a refund of $3.

Grant 53, 1921: $300 to F. P. Underhill, for the study of metabolism of inorganic salts. Results of work under this grant have been published in the *Journal of Biological Chemistry* and further publications are expected. Of this grant, the sum of $270 was used to buy platinum crucibles, which remain the property of the American Medical Association.

Grants 57 and 61, 1922 and 1923: $369.46 to Yandell Henderson, Yale University, for a kymograph. This instrument is the property of the Association, and a brass plate on the instrument so states. Several articles have been published on results of work aided by this grant.

Grant 64, 1923: $200 to E. R. LeCount, University of Chicago (Rush Medical College) for work on tuberculosis and mitral diseases. The work is completed, the results published in part, and final publication will be made in the near future. Complete account of expenditures has been made and $114.75 refunded.

Grant 69, 1924: $400 to Linda B. Lange, School of Hygiene and Public Health, Johns Hopkins University, for an investigation of the rôle of diet in tuberculosis. The work under this grant is completed, the report of the result will be published soon, and final account has been submitted.

Grant 74, 1924: $300 to Thomas Addis, Stanford University, for work on compensatory renal hypertrophy. The work under this grant is completed and final publication of the results will be made soon.

Grants 75 and 82, 1924 and 1925: $200 each to Victor Burke, State College of Washington, for the study of dyes in the treatment of infection. The results of the work under grant 75 have been published and the work under grant 82 has been finished and the results are about to be published. Full account has been rendered of the expenditures.

Grants 76 and 84, 1925 and 1926: $500 and $1,200, respectively, to Harry L. Huber, University of Chicago, for work on the chemical and immunologic properties of the pollens concerned in hay-fever and allied conditions. Work is in progress.

Grant 77, 1925: $500 to Arthur M. Yudkin, New Haven, for experimental investigation of cataract and related ocular changes. Work is in progress; a preliminary report has been published in Transactions of the Section on Ophthalmology of the American Medical Association for 1926.

Grants 78 and 91, 1925 and 1926: $400 and $1,200, respectively, to A. W. Meyer, Stanford University, for the study of polyneuritis and other changes from deficiency in diet. Interesting results have been reported and the work is going on.

Grant 79, 1925: $100 to Margaret M. Hoskins, professor of anatomy, dental department, New York University, for the study of the effect of thyroxin on growth. The work is completed and the results are about to be published.

Grant 80, 1925: $200 to Charles E. Simon, School of Hygiene and Public Health, Johns Hopkins University, for work on filtrable virus in cancer. The work is completed, the results published, and full account has been rendered of the expenditures.

Grant 81, 1925: $100 to William G. Lennox, department of neuropathology, Harvard Medical School, for work on epilepsy. Work in progress.

Grant 83, 1926: $65 to Roy L. Moodie, University of Illinois, for illustrations for article on paleopathology. Full account has been rendered.

Grant 85, 1926: $300 to Barnett Sure, University of Arkansas, for study of a dietary factor concerned in the secretion of milk. Work in progress.

Grant 86: $250 to P. E. Lineback, Emory University, Georgia, for a study of the macula lutea and fovea centralis with the object of establishing, if possible, a clearer morphologic foundation for binocular vision. Work under way.

Grant 88: $1,000 to Emery R. Hayhurst, University of Ohio, for a study of silicosis. The work has been completed and final report is nearly ready for publication. Full account of expenditures has been rendered.

Grant 89: $500 to Emery R. Hayhurst, Charles B. Morrey and Dana J. DeMorest, University of Ohio, for a study of the effect of combustion products of carbonaceous fuels on the susceptibility to pneumonia. Work in progress.

Grant 90: $500 to Carl W. Apfelbach and Edwin M. Miller, University of Chicago (Rush Medical College), toward the expenses of a study of the effects of the destruction of glomeruli in the kidney of the dog. Work well advanced.

Grants 91 and 98: $150 and $300, respectively, to Samuel A. Matthews, Loyola University, Chicago, for study of the parathyroid hormone. The work under grant 91 has been completed and the results published.

Grant 92: $750 to H. W. Manwaring, Stanford University, for investigation of fundamental problems of anaphylaxis and immunity. The work under this grant has been completed and the results are in course of publication.

Grant 93: $1,200 to Victor C. Jacobson, Albany Medical College, for further experimental study of endometriosis and allied problems. Work is under way.

Grant 94: $800 to Robert L. Benson, University of Oregon, toward the expenses of an experimental study of arteriosclerosis. Work is under way.

Grant 95: $240 to Nicholas W. Popoff, working under Prof. A. A. Maximow, for work in the department of anatomy in the University of Chicago, on the histogenesis of the thymus in vitro. The work is completed and the results are nearly ready for publication.

Grant 96: $2,000 to Aldred Scott Warthin and George R. LaRue, University of Michigan, for an investigation of *Dibothriocephalus latus* infection, particularly in Michigan.

Grant 97: $400 to Bernhard Steinberg, Western Reserve University, for experimental study on survival from peritonitis. The work has been completed and the results are in course of publication. A full account has been rendered of the expenditures.

Grants 98-102 were made so recently that the work is in the beginning only, and grant 103 does not take effect until March, 1927.

Financial Statement for 1926

Balance to credit of committee, Jan. 1, 1926	$ 506.32	
Appropriation for 1926	13,200.00	
Donation (C. A. Brant Fund)	1,140.51	
Refund Grant 52	3.00	
Refund Grant 64	114.75	$14,964.58
Grants and Expenses, 1926:		
Grant 77, A. M. Yudkin, balance	$ 250.00	
Grant 83, R. L. Moodie	65.00	
Grant 84, H. L. Huber	900.00	
Grant 85, T. C. Carlson (for Barnett Sure)	300.00	
Grant 86, P. E. Lineback	250.00	
Grant 87, E. R. Hayhurst	500.00	
Grant 88, E. R. Hayhurst	1,000.00	
Grant 89, C. W. Apfelbach	500.00	
Grant 90, S. A. Matthews	150.00	
Grant 91, A. W. Meyer	1,200.00	
Grant 92, W. H. Manwaring	750.00	
Grant 93, V. C. Jacobson	1,200.00	
Grant 94, R. L. Benson	800.00	
Grant 95, N. W. Popoff	240.00	
Grant 96, Warthin and LeRue	2,000.00	
Grant 98, S. A. Matthews	300.00	
Grant 99, Tulane University (Roy H. Turner)	300.00	
Grant 100, F. T. Rogers	100.00	
Grant 101, R. W. Hegner	1,140.51	
Grant 102, Helen Bourquin	250.00	
M. H. Fischer, meeting expense	42.02	
C. C. Bass, meeting expense	98.33	
N. W. Jones, meeting expense	226.66	
Printing	11.56	
Clerical expense	600.00	13,174.08
		$ 1,790.50
Unpaid grants, 1926:		
Grant 84, H. L. Huber, unpaid balance	$ 200.00	
Grant 97, Bernhard Steinberg	400.00	
Grant 103, Robert O. Loebel	855.00	1,455.00
Unallocated balance		$ 335.50

MEETING OF COMMITTEE

A meeting of the committee was held in Chicago, March 26, 1926, at which all members but one were present. The most important business of the meeting was the consideration of applications for grants. Of those considered, 58 per cent were allowed. The expenses of the meeting were $367.01.

APPLICATIONS ON HAND

There are a number of formal applications on hand, and the committee has received informal requests for aid in important projects for research.

RECOMMENDATIONS

The committee recommends that: 1. The report of Dr. E. O. Jordan, under grant 39, on the literature of the influenza epidemics of 1918-1919, be published in book form by the American Medical Association.

2. A provision of $12,000 be made for grants in aid of medical research during the current year, and that $1,200 be

appropriated for the use of the committee (meeting, clerical and minor expenses) during 1927.

Respectfully submitted. LUDVIG HEKTOEN, Chairman.

COMMITTEE ON SCIENTIFIC RESEARCH OF THE AMERICAN MEDICAL ASSOCIATION:

C. C. BASS, New Orleans, term expires 1927.
CHARLES H. FRAZIER, Philadelphia, term expires 1928.
N. W. JONES, Portland, Ore., term expires 1929.
MARTIN H. FISCHER, Cincinnati, term expires 1930.
LUDVIG HEKTOEN, Chicago, term expires 1931.

The Board of Trustees has made available for the Committee on Scientific Research the sum of $13,200.

Committee on Nurses and Nursing Education

In accordance with the terms of resolutions adopted by the House of Delegates at Dallas, the Board of Trustees appointed a Committee on Nurses and Nursing Education. The personnel of this committee is as follows: Drs. N. B. Van Etten, New York; W. E. Musgrave, San Francisco; C. W. Waggoner, Toledo, Ohio; Stewart R. Roberts, Atlanta, Ga.; Frank Billings, Chicago; H. M. Johnson, Dawson, Minn., and James R. Bloss, Huntington, W. Va.

Additions to Committees

Dr. Southgate Leigh of Norfolk, Va., and Dr. Tom B. Throckmorton of Des Moines, Iowa, were appointed to serve as additional members of the Committee to Cooperate with the Commissioner of Internal Revenue and the Secretary of the Treasury.

Dr. Francis I. Proctor, Camden, S. C., was made a member of the Committee on Trachoma Among Indians.

Committee to Consider Proposals from Other Organizations or Committees Concerning Cooperative Effort

The Board of Trustees desires that it shall be known that it has a standing committee appointed for the purpose of considering any and all proposals that may be submitted looking toward cooperative effort between the American Medical Association and any other reputable organization. This committee has been in existence since Nov. 20, 1925, and has held itself in readiness to give careful and sympathetic consideration to any proposal in which the cooperation of the American Medical Association is sought for the advancement of any worthy purpose. The committee has held three meetings, but only one definite proposition has been placed before it for consideration.

Disaster Relief

The plan proposed by a special committee consisting of Drs. William Allen Pusey, W. D. Haggard and Wendell C. Phillips has been adopted by a number of state associations and by approximately 10 per cent of the county medical societies. In a few instances, some modifications have been made in the plan proposed by the committee, and in several communities it has been found that organizations for medical disaster relief have been in existence for some time. It was not intended that any well organized scheme for affording medical relief in times of disaster should be supplanted; nor was it the intention of the committee with which the Association plan for disaster relief originated that this plan should not be changed in minor details to meet local conditions. It is believed, however, that the general scheme outlined by the committee provides for the establishment of a permanent relief organization, and that the state medical associations and the county medical societies are the agencies through which medical disaster relief should be administered. It is to be hoped that those state associations and county societies that have not taken official action will give immediate consideration to the report of the Committee on Medical Disaster Relief, in order that nation-wide organization may be perfected and thus make it possible for properly directed relief measures to be put into effect whenever occasion may demand.

Full-Time Representative in Washington

In accordance with the wishes of the House of Delegates, as expressed at the Dallas Session, the Board of Trustees has assigned a member of the staff of the Bureau of Legal Medicine and Legislation to full-time duty at Washington during the sessions of Congress.

Letters on Periodic Health Examination

The Reference Committee on Reports of Officers, acting on suggestions offered in the address of President Haggard, presented at Dallas, recommended that the Board of Trustees be requested to prepare letters to be used by the members of county societies for stimulating interest on the part of the public in periodic medical examinations. The House of Delegates approved this recommendation.

The Board of Trustees, after careful consideration and after having been advised that some county societies opposed the use of such letters, referred the matter to the Judicial Council for ruling as to the questions of ethics that might be involved. The Judicial Council has submitted the following statement to the Board of Trustees:

It is the opinion of the Judicial Council that the sending out of any circular letter of any form of printed or written matter which may be construed as advertising or as soliciting patronage by the individual physician or by any group of physicians is unethical.

In view of the statement presented by the Judicial Council, the Board of Trustees respectfully refers this matter back to the House of Delegates.

Cooperation with State Associations

At the Dallas Session, the following resolution, offered by Dr. Southgate Leigh of Virginia, was adopted by the House of Delegates:

Resolved, That the Board of Trustees be requested to extend to every state association all such assistance as may be possible in defining and carrying into effect its legislative policies, and in promoting uniformity in them.

The Bureau of Legal Medicine and Legislation was established to serve the very purpose that is referred to in this resolution, and has utilized its every resource to extend all possible cooperation to the state associations in dealing with legislative programs. To this end, the personnel of the Bureau of Legal Medicine and Legislation has been increased and its activities have been widely extended. The files of the bureau contain many communications from the officers of state medical associations and from chairmen of some of their committees, expressing appreciation for helpful service rendered by the bureau.

It should be remembered in this connection, however, that the Bureau of Legal Medicine and Legislation has to deal especially with national legislation and with rulings and regulations promulgated by various government departments, and that a large amount of work devolves on the bureau in dealing with these matters. It should also be remembered that it is not possible for the personnel of the bureau to attend the sessions of state legislatures and to participate in the detail involved in the enactment of proposed legislation or in opposing undesirable measures.

It has been the aim and desire of the Board of Trustees and of the entire official personnel of the American Medical Association to give all possible cooperation to state associations in connection with any matters of important interest to those organizations. Earnest efforts to this end will be continued.

Visits Made by Officers of Association to State and County Societies

Whenever feasible, representatives of the Association have, on invitation, attended meetings of state medical associations of district medical societies, and, in a few instances, of county medical societies. The President, President-Elect, members of the Board of Trustees, Editor of THE JOURNAL, Secretary and General Manager, and heads of various departments have attended such meetings in various parts of the country, from Colorado on the West to the Atlantic coast on the East, and from Florida to Minnesota. A number of invitations have been extended to the Association to have representatives at meetings of independent medical organizations, but it has not been possible to accept such invitations because of the demands made on the official personnel of the Association in connection with the meetings of component societies and constituent associations.

Application for Radio Broadcasting Permit

The Board of Trustees has considered the advisability of applying to the government for a radio broadcasting permit under which, if it becomes advisable to do so, a broadcasting station may be owned and operated by the Association.

Invitations to the Association in Connection with Annual Sessions

The Board of Trustees recommends that the House of Delegates adopt a rule designating a specific date on or before which invitations to the Association in connection with the place of meeting shall be submitted to the Secretary of the Association. Because comparatively few cities in the United States can provide adequate facilities in the way of meeting places for sections, exhibit halls and hotel accommodations, it is becoming more and more necessary that opportunity be given for prior investigation, so that the Board may be in a position to advise the House of Delegates with respect to the selection of the meeting place. The Board of Trustees will be glad to undertake this if it is desired that it shall do so, but such investigation can be carried out only if knowledge as to what cities propose to extend invitations is had a reasonable length of time before the annual session at which the place of meeting is to be selected.

Building and Equipment

The well established policy of maintaining the building of the Association and its equipment in the best possible condition has been continued. If the expansion that has taken place within the last three years continues, the present building, which was erected with the view that it would be entirely adequate for the needs of the Association for many years, will become inadequate. Use was not made of the sixth floor, except for storage purposes, until within the last few months; since then, because of the constant expansion of the work in the various departments of the Association, it has been necessary to move two departments to this floor. For present purposes, the building is suitable and entirely adequate, but the Board of Trustees is duly mindful of the possibilities with respect to future needs.

Business Affairs of the Association

The reports of the Treasurer and the Auditors, presented as a part of this report, will show that the financial situation of the Association continues to be sound and satisfactory. The expenditures for the year 1926 were considerably greater than in 1925, owing primarily to the expansion of the work of practically every bureau and department; to the increased circulation of, and the improvement effected in, most of the Association's periodicals; and to necessary increases in wages and salaries. Then, too, there was a considerable increase in the amount expended for postage, because of changes in the laws affecting postal rates. While the paper used in the publications was bought at practically the same price that obtained in 1925, a great deal more paper was used in 1926, with the result that there was considerable increase in the cost of this commodity. Although the costs of operation in practically every particular were larger in 1926 than in 1925, economies were effected, intended to keep operating costs within reasonable bounds.

The reserve funds of the Association are thought to be adequate to meet any emergency that may develop, and the Association may be said to be in strong financial position.

The Board of Trustees desires to express its appreciation for the efficiency and loyalty that have characterized the work of the entire personnel of the headquarters organization. This personnel has been made up, during the past year, of approximately 425 individuals.

EDWARD B. HECKEL, Chairman.
J. H. WALSH, Secretary.
ROCK SLEYSTER.
A. R. MITCHELL.
D. CHESTER BROWN.
E. H. CARY.
JOSEPH A. PETTIT.
J. H. J. UPHAM.
CHARLES W. RICHARDSON.

ADDENDA TO REPORT OF BOARD OF TRUSTEES

TREASURER'S REPORT

Report of the Treasurer of the American Medical Association for the year ending December 31, 1926

Reserve Invested as at Dec. 31, 1925	$425,062.05	
Less Baltimore Bonds Sold	4,681.25	
	$420,380.80	
Bonds Purchased (cost)	227,509.75	
Total Investments at Cost		$647,890.55
Balance for Investment Dec. 31, 1925	$ 7,527.86	
Interest on Investments	26,022.75	
Interest on Bank Balance	366.85	
	$ 33,917.46	
Less Treasurer's Check on Bonds Purchased	22,986.04	
Balance in Bank		10,931.42
Reserve and Surplus as at Dec. 31, 1926		$658,821.97

DAVIS MEMORIAL FUND

Bonds (at cost) as at Dec. 31, 1925		$ 3,708.25
Bank Balance, Dec. 31, 1925	$1,071.77	
1926 Interest on Bonds	170.00	
1926 Interest on Bank Balance	34.92	1,276.69
Total Fund as at Dec. 31, 1926		$ 4,984.94

AUSTIN A. HAYDEN, Treasurer.

AUDITOR'S REPORT

January 18, 1927.

To the Board of Trustees,
American Medical Association, Chicago, Illinois.

Dear Sirs:

In accordance with your instructions, we have audited the accounts of the American Medical Association, for the year ended December 31, 1926, and have prepared therefrom and append hereto the statements undermentioned:

Exhibit "A"—Balance Sheet, as at December 31, 1926.
Exhibit "B"—Income Account, for the year ended December 31, 1926.
Schedule "1"—Journal Operating Expenses.
Schedule "2"—Association and Miscellaneous Expenses.

We certify, subject to the undernoted comment, that the Balance Sheet and Income Account correctly present, in our opinion, the financial position of the Association as at December 31, 1926, and the results of its operations for the year ended on that date.

The cash and bank balances and securities have been verified by count or inspection or by certificates obtained from the depositories.

The charges to the property and equipment account during the year represent actual additions and improvements. The expenditures thereon, $16,717.18, have been made out of the floating assets of the Association. Depreciation written off during the year appears to be adequate.

No provision has been made for accrued interest and taxes, nor for memberships and subscriptions due and unpaid. With regard to "Subscriptions Paid in Advance," this element is represented on the Balance Sheet by a sum of $49,971.85, which sum, however, was not determined as the result of actual computation. It is composed of collections made during the month of December, 1926, which apply to the year 1927 and does not include any proportion of collections received prior to the month stated which cover issues to be delivered in 1927.

During the course of the audit, we made an exhaustive test of the various sources of income and verified the expenditures against properly approved vouchers on file. We have pleasure in reporting that the accounts are well and accurately maintained.

Yours truly,
PEAT, MARWICK, MITCHELL & Co.

EXHIBIT "A"

BALANCE SHEET AS AT DECEMBER 31, 1926

ASSETS:		
Property and Equipment (at Cost, less Depreciation):		
Real Estate and Buildings	$	674,640.90
Machinery		118,096.33
Type and Metal		11,785.80
Furniture and Equipment		48,154.97
Chemical Laboratory		3,435.43
Library		517.79
Total Property and Equipment	$	856,631.22
Investments (at cost):		
U. S. Government Securities $284,447.80		
Railroad and Municipal Bonds 363,442.75		$647,890.55
Cash held by Treasurer for Investment	$	10,931.42
Cash in Bank and on Hand—General Account		80,846.80
Temporary Investments—Certificates of Deposit		50,000.00
Notes Receivable		1,877.62
Accounts Receivable:		
Advertising $ 62,947.34		
Co-operative Medical Advertising Bureau 10,939.01		
Reprints 4,318.25		
Miscellaneous 16,339.49		$94,544.09
Inventories of Materials, Supplies and Work in Progress	$	89,096.77
Expenditure on Publications in Progress		101,656.65
Prepaid Expenses—Insurance, etc		2,673.79
Total		$1,936,148.91
LIABILITIES:		
Accounts Payable:		
Co-operative Medical Advertising Bureau	$	10,090.59
Miscellaneous		1,081.73
	$	11,172.32
Subscriptions Paid in Advance		49,971.85
Advance Payments on Publications		143,088.58
Net Worth:		
Association Reserve Fund $ 250,000.00		
Capital Account:		
Amount thereof as at December 31, 1925 $1,342,637.89		
Net income for the year ended December 31, 1926 139,278.27	1,481,916.16	
Net Worth as at December 31, 1926		$1,731,916.16
Total		$1,936,148.91

EXHIBIT "B"

INCOME ACCOUNT

FOR THE YEAR ENDED DECEMBER 31, 1926

JOURNAL:		
Gross Earnings:		
Fellowship Dues and Subscriptions	$	435,751.33
Advertising		798,059.00
Jobbing		82,023.44
Reprints		3,768.37
Books		8,663.89
Insignia		5,735.96
Miscellaneous Sales		9,471.89
Interest		6,949.96
Gross Earnings from Journal		$1,350,423.84
Operating Expenses—Schedule "1"		892,456.83
Net Earnings from Journal	$	457,967.01
Miscellaneous Income:		
Rents $ 1,740.00		
Sundry Publications 5,851.27		
Co-operative Medical Advertising Bureau 1,592.26		9,183.53
Association Income:		
Income from Investments $ 23,705.24		
Income from Other Sources 866.22		
Profit on Sale of Investments 206.25		24,777.71
Gross Income	$	491,928.25
Association Expenses—Schedule "2" $200,841.06		
Miscellaneous Expenses—Schedule "2" 151,808.92		352,649.98
Net Income	$	139,278.27

SCHEDULE "1"

JOURNAL OPERATING EXPENSES

FOR THE YEAR ENDED DECEMBER 31, 1926

Wages and Salaries			$388,545.65
Editorial, News and Reporting			13,236.95
Paper—Journal Stock			260,200.83
Paper—Miscellaneous			9,536.17
Electrotypes and Engravings			20,401.86
Binding			1,330.13
Ink			6,057.11
Postage—First Class			26,932.09
Postage—Second Class			52,075.75
Journal Commission			8,942.63
Collection Commission			1,415.77
Discounts			24,523.93
Express and Cartage			4,311.76
Exchange			2,791.20
Office Supplies			2,194.16
Telephone and Telegraph			2,337.26
Office Jobbing			8,792.39
Power and Light			6,288.32
Factory Supplies			11,091.76
Repairs and Renewals—Machinery			4,935.89
Losses on Bad Debts			938.54
Miscellaneous Operating Expenses			15,794.76
Total Journal Operating Expenses before provision for depreciation			$872,674.91
Depreciation on Equipment:			
Machinery	10%	$13,121.82	
Furniture and Equipment	10%	3,836.93	
Factory Equipment	10%	1,513.63	
Type	10%	500.17	
Metal	10%	809.37	19,781.92
Total Journal Operating Expenses			$892,456.83

SCHEDULE "2"

ASSOCIATION AND MISCELLANEOUS EXPENSES

FOR THE YEAR ENDED DECEMBER 31, 1926

Association Expenses:		
Association	$	75,680.47
Health and Public Instruction		12,179.02
Pharmacy and Chemistry		15,723.78
Chemical Laboratory		14,839.53
Medical Education and Hospitals		34,275.63
Organization and Field Secretary		2,029.75
Therapeutic Research		3,101.92
Legal Medicine and Legislation		19,212.03
Bureau of Investigation		18,078.05
Physical Therapy		5,339.17
Laboratory Depreciation—10%		381.71
Total Association Expenses		$200,841.06
Miscellaneous Expenses:		
Insurance and Taxes	$	19,300.02
Legal and Investigating		5,698.54
Building Expense		27,686.96
Sundry Publications		80,214.59
Building Depreciation—2%		11,843.53
Library Depreciation—10%		57.53
Fuel		7,007.75
Total Miscellaneous Expenses		$151,808.92

REPORT OF THE JUDICIAL COUNCIL

To the Members of the House of Delegates of the American Medical Association:

Since the Dallas session last year, the Council has held two meetings, at which consideration was given to various communications either addressed or referred to the Council. In the interim between the meetings of the Council, work has been carried on through correspondence.

DEFINITION OF WORD "CLINIC"

The Judicial Council has been asked to give a definition of the word, "clinic," as used by those doing so-called group practice. Originally the word in its verbal form meant "to lie down," or "to recline." And in its nominal form it signified that on which one lies or reclines; namely, a bed. Owing to the fact that most persons who are really ill are confined to bed, the word acquired the somewhat specific meaning of a bed of sickness. With the recognition of the importance of practical instruction at the bedside in the teaching of medicine, the term "clinique" was introduced in France to designate an institution or school where students were taught by the examination and treatment of patients in their presence. Clinique was Anglicized into clinic, but its application to a teaching institution has always been retained up to very recent times. In a changing world, words frequently acquire meanings not contained in their original significance. The term "clinic" was adopted comparatively recently by a few physicians and by a greater number of groups of physicians to designate their offices or workshops, perhaps for the want of a better term, perhaps for the purpose of conveying to the public mind the idea of greater importance or of institutional dignity. Whether or not the use of the term in this connection has come to stay cannot be predicted; but that its use in this way does not find justification in the original significance of the word is evident.

CONTRACT PRACTICE

At the last meeting of the House of Delegates at Dallas, Texas, the Judicial Council was requested to investigate the subject of contract practice and to present a report at the

next meeting. The task has not been an easy one, since it has been very difficult to obtain reliable information, which has been sought from all parts of the country, concerning the extent to which contract practice exists, and also on the various forms of the contracts. But the responses received have been rather disappointing. That the responses received cannot be accepted as an indication of the prevalence of the practice is evidenced by the constantly increasing number of communications received by the Council from different parts of the country asking for opinions as to the ethical or unethical status of some particular phase of the subject. There is no doubt that the practice is growing in frequency and becoming widespread. In fact, it is entering into so many phases of the practice of medicine as to be a distinct menace to the stability of our organization. In one instance an entire state seems to be divided unto itself on this subject. That so many members of the profession seem to be engaged in the practice may in a measure account for the paucity of the replies to the inquiries sent out.

It will be remembered that a year ago the Council was requested to define what constituted contract practice and it did so in the following words:

> By the term "contract practice," as applied to medicine, is meant the carrying out of an agreement between a physician or group of physicians as principals or agents and a corporation, organization or individual, to furnish partial or full medical services to a group or class of individuals for a definite sum or for a fixed rate per capita.

This definition, we believe, will be found to cover every form of contract practice. It will be observed that in the definition no mention is made of the ethics of the practice for the reason that contract practice per se is not an ethical question, ethics being concerned with the form of the contract and the conditions under which it is made. That there are many conditions under which contract practice is not only legitimate and ethical, but in fact the only way in which competent medical service can be provided, becomes evident on analysis. For instance, where large numbers of workmen are employed remote from urban centers, as in some mining or logging camps, in such instances efficient medical service can be secured only by contracting with some competent physician to do the work. Certain industrial situations arise wherein large employers of labor are compelled by law to provide medical services for their employees under certain conditions, and this at times can be secured only by some form of contract. A community too small to offer sufficient inducements to a competent physician to locate therein may secure one by some form of contract or agreement as to compensation. It is perfectly evident, therefore, if we are to judge whether a contract is ethical or not, that we must know the form and terms of the contract as well as the particular circumstances under which it is made. As there is such a great variety of contracts, and as their form and the circumstances under which they are made differ so widely, it seems impossible, or at least inadvisable, to attempt to define what constitutes an ethical contract. Each case must be judged on its own merits after all the facts pertaining thereto are known. There are certain points, however, that may be formulated which, when present, one or more of them, definitely determine a contract to be unfair or unethical. These may be stated as follows:

1. When the compensation received is inadequate based on the usual fees paid for the same kind of service and class of people in the same community.

2. When the compensation is so low as to make it impossible for competent service to be rendered.

3. When there is underbidding by physicians in order to secure the contract.

4. When a reasonable degree of free choice of physicians is denied those cared for in a community where other competent physicians are readily available.

5. When there is solicitation of patients directly or indirectly.

In the interpretation of the rules of ethics as applied to the practice of medicine: (1) By the word "practice" is meant the performance or application of medical knowledge; (2) by "solicitation" is meant to bespeak professional patronage by oral, written or printed communications either directly or by an agent; (3) by "patient" is meant any person ill or otherwise.

Conditions of Membership

At the Dallas session in 1926, the Judicial Council presented a supplementary report dealing with questions of membership. This report was referred to the Reference Committee on Amendments to the Constitution and By-Laws and was not adopted by the House of Delegates. As the same questions referred to in that supplementary report of the Council continue to be raised, the Judicial Council again offers the same recommendations submitted at the Dallas session and respectfully asks for their thorough consideration by the House of Delegates. The supplementary report presented at the Dallas session is herewith made a part of the report of the Judicial Council to the House:

During the past year there have been submitted to the Judicial Council, for decisions, questions that have made it clear to this Council that a few slight changes are desirable in our fundamental law if consistent and effective decisions are to be made possible.

As the matter stands at present, there is a lack of uniformity in the laws of the several county societies and state associations, so that when appeals are taken to the Judicial Council, the Council finds itself unable to render consistent decisions owing to irreconcilable contradictions found in the laws of the societies or associations taking the appeal. The appeals that give rise to the greatest difficulties are those which involve a question of membership. It seems to be quite generally recognized that the county society has the sole right to determine who shall or shall not be admitted to membership. As membership in a state association and in the national association is made dependent on membership in a county society, it is provided in the laws of many state associations that a physician who has been refused admittance to his county society may appeal to the council or board of censors of his state association and in some instances to the House of Delegates, and the board of censors may overrule the action of the local society and direct that the person be admitted to membership. It is at this point that the difficulties arise. Should the board of censors or the House of Delegates overrule the action of the local society and direct that the rejected person be admitted to membership, there is no way of enforcing the mandate.

Of course, the state association may revoke the charter of a local society, which may be likened to killing the goose to get an egg which, after all, may be bad. Certainly the remedy is too destructive, but without some remedy the situation reaches an impasse which the Judicial Council is unable to bridge over.

Appeals have come to this Council in which diametrically opposite conditions are found to exist. For instance, a local society refused to admit a physician to membership, and an appeal was taken to the state council, which overruled the action of the local society and directed that the physician be admitted to membership. The local society refused to comply with the order of the state council, and the matter was referred to the Judicial Council.

Again, a local society admitted to membership a physician that the state association considered most objectionable and directed that the local society expel him. The local society replies that the physician in question is *persona grata* to its members and refused to comply with the demand of the state association.

The Judicial Council is without power to act in either case. In the one instance, local prejudice or personal animosity prevents a good man from becoming a member of his state and of the national association, and in the other instance, local indifference forces a most undesirable man into the state and national associations.

At present there is no adequate remedy in such cases. We believe that the difficulty may be overcome in one of two ways:

The local society may not be the sole or final judge of who shall be admitted to membership, or some provision may be made by which the state and (or) national associations may, under certain conditions, determine its own membership.

It does not seem feasible or perhaps possible to remove from the local society the right to judge as to who shall be

admitted to its membership. The attempt to force a local society to accept as a member one who has been rejected by a fair vote of the society can result only in disaster to the organization. On the other hand, local prejudice or personal animosity or spite may, as has already come to the attention of this Council, by keeping a man out of his local society, unjustly debar him from membership in our organization. This injustice may be remedied by making some provision by which one who has been unjustly kept out of his local society may become a member of his state and thus of the national association.

No one should be permitted to apply directly to the state association for membership unless and until he has been definitely refused admittance to his local society and until he has appealed his case to the board of censors or council of the state association, and only then provided the board of censors or council has given his appeal a fair hearing and is convinced that he has been unjustly kept out of his local society, and that it is impossible to reconcile the local society to admitting him to membership, and provided further that the board of censors or the state council recommends him for membership in the state association. The state house of delegates may then elect him to membership, in which case he would thereby become a member of the American Medical Association.

The house of delegates of a state association should also have the power to expel a man from membership, in case the local society refused to do so, on the advice and recommendation of the board of censors or council.

The House of Delegates of the American Medical Association, on the recommendation of the Judicial Council, should have the power to expel a member in case the state association and local society refused so to do.

The Judicial Council suggests that the House of Delegates of the American Medical Association and of the several state associations make such amendments to their by-laws as will make effective the foregoing recommendations.

The recommendations of the Reference Committee at the Dallas session were as follows:

The supplementary report of the Judicial Council in supporting an amendment to the Constitution was submitted, and the committee recommends that we adopt this amendment to the by-laws. Dr Van Derslice read the portion of the report of the Judicial Council referred to:

Membership in the American Medical Association is regularly obtained through membership in a constituent association and in one of its component county societies. Should a qualified physician, however, be refused membership in his component county society, he may appeal his case to the board of censors or proper tribunal of the state association in the manner provided for in the by-laws of the particular county society and state association. Should the appeal tribunal, after a careful, fair and unbiased hearing of the case, find the appellant to be worthy of membership in the organization, and should the tribunal after reasonable efforts fail to reconcile the county society to the acceptance of the appellant as a member of the said society, the house of delegates of the constituent state association, on the recommendation of the appeal tribunal, may elect the said appellant a member of the state association, the appellant thereby becoming a member of the American Medical Association.

Should any member of the American Medical Association be deemed by the Judicial Council to be unworthy of membership in the said Association, it shall be the duty of the Secretary, on the recommendation of the Judicial Council, to notify the secretary of the said member's constituent association and he in turn the secretary of the said member's component society of the facts in the case; and should the state association and the local society fail to take proper action in the premises, the House of Delegates, on the recommendation of the Judicial Council, may expel the said member from the American Medical Association.

Respectfully submitted.

M. L. HARRIS, Chairman.

F. W. CREGOR.
W. S. THAYER. J. N. HALL.
G. E. FOLLANSBEE. OLIN WEST, Secretary, ex officio.

REPORT OF THE COUNCIL ON MEDICAL EDUCATION AND HOSPITALS

To the Members of the House of Delegates of the American Medical Association:

The Council's work during the last year in regard to hospitals, nurse training schools and clinical laboratories is set forth in considerable detail in the Hospital Number of THE JOURNAL, which was issued, March 12. The main work in connection with medical schools appears in the Educational Number each year, the last one having been issued, Aug. 21, 1926. The Council's work in medical licensure will be set forth in detail in THE JOURNAL of April 30, 1927. The following report, therefore, deals briefly with progress during the year and other items of particular importance.

MEDICAL SCHOOLS

During the last year the charter of the Kansas City College of Medicine and Surgery was revoked on the charge that it had been engaged in the sale of diplomas. Almost immediately thereafter, however, a newly chartered institution was opened on the same site, and evidently by the same group, under the name of the American Medical University. Information thus far received does not give promise that the new institution is being maintained in a manner different from its predecessors.

There still remain, therefore, six low grade medical schools: one in Chicago, two in Boston, two in Kansas City and one in St. Louis. The last school referred to, the St. Louis College of Physicians and Surgeons, was also charged with being involved in the Missouri diploma-mill ring. This school has already introduced a new title, the "Missouri College of Medicine and Science," apparently in anticipation of the revocation of its other charter.

TABLE 1.—*Enrolments of Medical Students for Sixteen Years, Showing Variation in Numbers by Classes*

College Session	Freshmen	Sophomores	Juniors	Seniors	Totals
1911-1912	5,048	4,063	4,294	4,759	18,164
1912-1913	4,699	4,170	3,711	4,436	17,016
1913-1914	4,724	4,006	3,813	3,966	16,509
1914-1915	3,396	3,932	3,700	3,885	14,913
1915-1916	3,602	3,105	3,579	3,736	14,022
1916-1917	4,107	3,117	2,866	3,674	13,764
1917-1918	4,283	3,521	2,893	2,933	13,630
1918-1919	3,104	3,587	3,272	2,967	12,930
1919-1920	4,234	2,837	3,464	3,263	13,798
1920-1921	4,825	3,588	2,637	3,416	14,466
1921-1922	5,412	4,219	3,355	2,619	15,635
1922-1923	5,162	4,615	3,861	3,322	16,960
1923-1924	5,160	4,441	4,330	3,797	17,728
1924-1925	5,492	4,415	4,136	4,157	18,200
1925-1926	5,753	4,779	4,201	4,107	18,840
1926-1927*	5,919	4,964	4,529	4,120	19,532

* Estimate.

The light line drawn through the table underscores the figures that show the lowest ebb in the enrolment in the respective classes ollowing the adoption of higher entrance requirements. A temporary diminution in the numbers, shown by the dotted line, began with the freshmen in 1918-1919, which was due to the enlistments in the World War. While the figures for 1926-1927 are estimated, they are fairly accurate, since reports from all but a few colleges were obtained.

MEDICAL SCHOOL PROGRESS DURING THE YEAR

Several medical schools are actively engaged in the erection of new college buildings which are nearing completion. These are the University of Chicago, Northwestern University, University of Tennessee and the Detroit College of Medicine and Surgery. At Washington, D. C., an affiliation has just been established between the George Washington University, the Garfield Memorial Hospital and the Washington Home for Foundlings. The last named is intending to erect and maintain a hospital for the care and treatment of women who have cancer. According to the plan under contemplation, the present buildings of the medical school will be disposed of

and a new building erected immediately adjoining the grounds of the Garfield Memorial Hospital. Larger plants are being contemplated also by Georgetown and Howard universities at Washington, D. C., and Temple University, Philadelphia.

MEDICAL STUDENTS

The rapid increase in the enrolment of students in medical schools has been continued, as shown in table 1. An estimate indicates that this year the total will reach 19,532, an increase of 692 over the total for last year. The number of graduates according to the estimate will be approximately 4,000, only a slight increase over last year being anticipated. It is expected that for the next three or four years at least there will be larger increases in the numbers of graduates.

CAPACITY OF MEDICAL SCHOOLS

Apparently the medical schools are more nearly filled to capacity during the present session than they were during previous years. Through several bulletins issued during the last summer the vacancies still existing in medical schools were brought to the attention of students seeking enrolment. The last bulletin was published in THE JOURNAL, Sept. 18, 1926. This showed that 224 vacancies still remained, of which only twenty-three were in the freshman classes, and these were probably filled by the time the college year opened. Each year, however, the medical schools are increasing their capacity whereby it is believed that most if not all of the properly qualified applicants will find places.

SUPPLY OF PHYSICIANS

The latest figures show that the United States is still better supplied with physicians in proportion to its population than any other country. The number of physicians for every

TABLE 2.—*Supply of Physicians in Eight Countries, Including the United States*

Countries	Relative Supply of Physicians Graphically Shown (10 20 30 40 50 60 70 80 90 100 110 120 130)	Physicians per 100,000 Pop.	Year Data Were Pub.
Sweden		28.6	1925
France		35.3	1912
Austria		47.2	1912
Germany		51.5	1912
Japan		73.5	1925
Switzerland		77.5	1925
Great Britain		92.0	1921
United States		132.8	1925

100,000 of population for seven other countries and the United States is shown in table 2. The figures were ascertained for the years indicated in the last column. As will be seen, the United States has 133 physicians for each 100,000 people, as compared with 92 in Great Britain, 77 in Switzerland, 73 in Japan, 51 in Germany, 47 in Austria, 35 in France and 28 in Sweden.

Better public health measures appear to be further diminishing cases of illness, which, coupled with the increasing facilities for communication, are tending to decrease the need for physicians. On the other hand, hospitals are rapidly increasing in numbers and, through such financial foundations as the Commonwealth Fund of New York, hospitals are being erected in rural districts which have a sufficiently large population to support them. This will help to place modern medical service as well as physicians within the reach of people living in rural districts.

IMPROVEMENTS IN MEDICAL EDUCATION

A notable movement in medical schools is the improvement of medical instruction. This is through the securing of better qualified teachers as well as in developing more efficient methods of instruction. Larger opportunities are being provided also whereby medical students can obtain experience in the physical examination, diagnosis and treatment of patients in dispensaries and hospitals. Thus medical education has changed from the former type, which consisted mostly of didactic lectures and recitations, to that in which the student spends a larger portion of his time in practical and clinical work. A greater use also is being made of necropsies whereby students acquire more proficiency in interpreting symptoms and signs found in the physical examination of patients. Clinical-pathologic conferences also are being more generally used in medical schools.

REVOLUTIONIZED METHODS OF TREATING DISEASES

The methods of treating diseases now employed differ greatly from those used a few decades ago. In the earlier times, graduates of medical schools began active practice immediately after completing their medical course, which included very little contact with patients. Few accidents resulted from inexperience because the therapeutics of that time did not include the many highly technical and dangerous procedures now so commonly employed. At present, surgery has a much wider field of service and is being sometimes employed in connection with the heart, the brain and other vital parts of the body. It is only in comparatively recent years that serums, antitoxins, insulin and other like preparations, as well as the roentgen ray and radium, which are now so extensively used, have been developed. These newer methods are saving thousands of lives, including patients suffering from diseases formerly considered beyond the help of the most skilled physicians. These modern methods, however, are highly dangerous to patients if their use is attempted by practitioners who are not trained regarding them and skilled in their use. It is highly important, therefore, that those who now presume to treat sick or injured people must not only possess a knowledge of the sciences fundamental to medicine but also be skilled in examining patients, making accurate diagnoses, and applying the particular form of treatment which the condition of the patient calls for, whether it be surgery, serums, blood transfusions or other of the great multiplicity of valuable agents now available in the practice of medicine. At present, therefore, there are many more dangers from illiterate, incompetent or unskilled practitioners than have heretofore existed.

PRESENT-DAY MEDICAL COURSE

The importance of a comprehensive course of medical instruction, such as is now required in practically all medical schools, cannot be overemphasized. There is much room for improvement in securing better teachers and the adoption of better teaching methods, but there should be no retrogression in the general content of the medical course. The revisions of grammar and high school courses now being made are saving one or two years of the students' time. An additional year can undoubtedly be saved through a general adoption of the quarter system and the use of the time now so largely wasted in overlong vacations. Nothing must prevent the young physician from securing a thorough training in the fundamental branches and obtaining experience and skill in the examination and treatment of patients under the supervision and tutelage of his teachers. His medical instruction can be further rounded out by an improvement of the instruction furnished during his year of hospital internship.

SPECIALIZATION

With the great increases in medical knowledge and the multiplicity of methods now employed in treatment, specialization is more essential if the physician is to secure a better knowledge or develop a higher skill in the treatment of any particular type of disease. The danger is not from specialization itself, but from pretense of specialization by those who have not secured the additional knowledge and skill required. The increasing tendency of patients to enter hospitals, meanwhile, is due to the fact that hospital staffs supposedly include departments in the various specialties. The hospital is also looked on as essential in the modern practice of medicine because a physician on the staff can more easily limit his practice to patients in his chosen specialty.

RESIDENCIES IN SPECIALTIES

The present-day course of medical instruction leads directly to specialization and also provides a highly efficient type of special training. A student completes his undergraduate medical instruction and then completes an internship in a general hospital. In many hospitals having large bed capacities, interns who have shown unusual proficiency have the opportunity to proceed to advanced internships or residencies as house physicians or house surgeons, or their service may be in one of the narrower specialties, such as pediatrics, orthopedic surgery, urology or ophthalmology. In such residencies the young physician is enabled to develop higher knowledge and skill under the direct tutelage of the physician who is himself highly skilled in the particular specialty. This is the modern but more highly efficient substitute for the old-time preceptorship.

MEDICAL PRACTICE INCREASINGLY PREVENTIVE

With the disappearance of most of the epidemic diseases and the great reduction of deaths among infants through efficient health measures and child welfare work aided by the better physical development of the present generation, the practice of medicine is destined to turn more and more toward the prevention of disease. The future physicians, therefore, will probably render more service in keeping people well than in merely curing them when sick. Accidental conditions will always require medical or surgical procedures, but increasing numbers of people will undergo periodic health examinations in order to maintain good health. Then many disease processes will be discovered and checked in their very beginning and, in this way, much suffering, illness and invalidism will be prevented. The success of this type of practice, however, will depend largely on the integrity and skill of the physician, who will recognize diseases in their early stages and who will not commercialize his opportunity of finding disease when none is present.

HOSPITAL DATA

Hospital statistics in detail are to be found in the reprints from THE JOURNAL of March—the Hospital Number. The main points may be briefly stated as follows:

(*a*) There are now 6,946 hospitals in the United States with a total capacity of 859,445 beds. This is an increase of fifty hospitals and 22,869 beds since 1925. If the hospitals in the United States possessions were added, the total would be further increased to 7,194 hospitals with a total capacity of 880,339 beds.

(*b*) There are 316 hospitals affiliated with undergraduate medical teaching, consisting of forty-nine which are owned and controlled by the medical schools; thirty-seven which, although separately owned, are fully controlled so far as the teaching material is concerned; forty in which generous use is made of the clinical material; fifty-nine in which moderate use is made of such material, and 131 in which clinics are held at least occasionally.

(*c*) There are 578 hospitals approved for the training of interns, which provide, in all, 4,952 internships. This is an increase of only seventy hospitals since 1914, but there has been a great improvement in quality. During the twelve years, 189 hospitals were dropped from the list and 259 others were added, but only after careful investigation. In 1914 there were only 2,667 internships, including many of doubtful value, while at present there are 4,952 internships available in carefully selected hospitals.

(*d*) There are now 270 hospitals, which provide 1,699 residencies (higher internships) in which advanced instruction can be obtained in any one of the various specialties. A list published shows where such residencies can be obtained.

(*e*) As a result of investigations conducted during the year, instead of the provisional list of 162 clinical laboratories published a year ago there is now a reliable list of 145 such laboratories which have been approved.

NURSE TRAINING SCHOOLS

The Hospital Number, published March 12, contains elaborate statistics regarding nurse training schools in the United States. The more noteworthy facts are briefly set forth as follows:

(*a*) There are 2,155 nurse training schools in the United States, of which 1,814 are reported as accredited by the states in which they are located.

(*b*) The 2,093 nurse training schools from which complete reports were obtained had a total enrolment last year of 76,527 students, of whom 17,522 graduated.

(*c*) In five states, four years of high school work is the required preliminary education; two or more years of high school are required in fourteen states; one or more years are required in twenty-three states, and in six states no standard of preliminary education has been fixed.

(*d*) The length of the course required in twenty-five states is thirty-six months, in six states from twenty-eight to thirty months, in twelve states twenty-six months, and in seventeen states twenty-four months.

(*e*) In all there are 327,045 *registered* nurses in the United States, or about twenty-eight to every 10,000 persons. The total number of *unregistered* nurses whereby the total nurse supply could be ascertained is not known.

SUMMARY

1. Progress in medical schools consists chiefly in the enlargement of teaching plants, in securing better qualified teachers, and in the adoption of improved methods of instruction.

2. The numbers of students enrolled have increased from 12,930 in 1919 to 18,840 in 1926 and to approximately 19,532 in the present session.

3. Although students are having some difficulty in securing enrolment, nevertheless, the enrolment does not seem to have reached the full capacity of the colleges. A bulletin published at the end of September revealed 224 vacancies still remaining at that time in class A medical schools. There were twenty-three vacancies in the first year classes, and these were probably filled by the time the college session was opened.

4. The supply of physicians in the United States is 133 for each 100,000 people, as compared with 92 in Great Britain, 77 in Switzerland, 73 in Japan, 35 in France and 28 in Sweden. The numbers of graduates of medical schools in the United States each year is also gradually increasing.

5. The present-day methods of combating diseases have been developed mostly in the last thirty years and include many highly technical procedures which require a high degree of skill for their successful use. In skilled hands these methods are saving thousands of lives, but if attempted by untrained or inexpert practitioners they are highly dangerous and may have disastrous results.

6. Progress is being made in shortening the course of grammar and high school education, which is saving one or more years of time for many students. Another year of valuable time can be saved through a more general adoption of the quarter system and the use of summer months which are now being wasted in overlong vacation periods.

7. The tendency toward specialization is due to the greatly increased knowledge of medicine and the multiplicity of highly technical methods of treatment. Such specialization need not cause anxiety or be deplored. The danger is not from specialization itself but from those who pose as specialists who have not secured the additional essential knowledge or skill in such specialties.

8. The most efficient training for those intending to limit their practice is through advanced internships or residencies in hospitals where, following their year of hospital internship, the young physicians spend from one to three years as residents under the immediate tutelage and supervision of physicians who have already become highly skilled in the various specialties. Internships and residencies constitute the modern and more efficient substitute for the preceptorships of earlier times.

9. The future practice of medicine promises to deal more largely with the prevention of disease—of keeping people well rather than merely curing them when sick. Through thorough examinations by reputable physicians the public, it is believed, can be induced to undergo periodic health examinations whereby disease processes may be discovered and checked in their incipience.

10. The marvelous development of hospitals during the last twenty years has closely followed the similarly remarkable developments of medical knowledge and medical education. Hospitals are now a highly important factor also in both medical education and practice, and their future improvement depends mainly on (*a*) the further development of their educational function; (*b*) a more general use of necropsies on larger percentages of deaths occurring in the hospitals; (*c*) a more general use of clinical-pathologic conferences in hospitals, and (*d*) a further development in them of the spirit of investigation and research.

11. The most important factor in every hospital is the maintenance of a high moral and professional standard on the part of those who are admitted to the staff or who are permitted to care for patients in the hospital.

SPECIAL ITEMS

The attention of the House of Delegates is directed particularly to the three following items:

THE JOINT COMMITTEE ON THE GRADING OF NURSING SCHOOLS

A separate report shows in detail the various steps in the development of the present Committee on the Grading of Nursing Schools, of which Dr. William Darrach is the delegate of the American Medical Association and who also is chairman. This report is again presented for such action as the House of Delegates may care to take in the matter. The Council's recommendation is that, as the survey being carried on by this committee is what was recommended in 1923 by the special committee of which Dr. Robert W. Lovett was chairman; the survey has been well planned, and an excellent beginning has been made—in the unanimous opinion of the Council, the scheme is worthy of receiving both the moral and the financial support of the Association.

MEDICAL ETHICS

At the Council's February conference the chairman's address dealt with the subject of medical ethics, which was followed by a prolonged discussion. The Council also received a note from the Board of Trustees urging that something be done to stimulate better teaching of medical ethics in medical schools. A subcommittee appointed for the purpose, of which President-Elect Jackson was a member, brought in the following report, which was unanimously adopted by the Council:

The Council on Medical Education and Hospitals of the American Medical Association recommends to the Association of American Medical Colleges that adequate instruction in the traditions and principles of medical ethics be included in the required curriculum of all medical students. While realizing that the subject is now touched upon in all schools and that its principles can be inculcated by example, yet the Council believes that detailed and sympathetic explanation of the "Principles of Medical Ethics" as formulated by the American Medical Association should be the minimum of the formal instruction given in medical schools.

The Council suggests that the subjects of medical economics, medical jurisprudence, medical history and perhaps also in some instances pastoral medicine might be conveniently grouped with that of medical ethics under the general title of the "Social Relations of the Physician."

The Council recommends also to the American medical profession through it national, state and local organizations that it seek to adequately familiarize its members with the same material suggested for medical students.

A REQUIREMENT OF NECROPSIES IN HOSPITALS APPROVED FOR INTERNS

At the Council's business meeting held Feb. 13, 1927, a report was presented showing for each of the hospitals approved for internships the percentage of deaths on which necropsies were held during 1926. The result showed that out of 575 such hospitals there were nineteen in which necropsies were not held or regarding which no record was kept or no reports received. As the percentage of necropsies has now come to be recognized as an index of the hospital's genuine educational activities, the Council adopted the following requirement:

That after Jan. 1, 1928, no hospital will be approved for the training of interns which does not have a record of necropsies on at least 10 per cent of all deaths in the hospital each year; that after Jan. 1, 1929, the minimum requirement will be 15 per cent, and that the hospitals on the list having less than these percentages be promptly notified of this requirement.

Respectfully submitted.

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS
ARTHUR D. BEVAN, Chairman.
WALTER F. DONALDSON.
MERRITTE W. IRELAND.
WILLIAM PEPPER.
SAMUEL W. WELCH.
RAY LYMAN WILBUR.
LOUIS B. WILSON.
N. P. COLWELL, Secretary.

REPORT OF THE COUNCIL ON SCIENTIFIC ASSEMBLY

To the Members of the House of Delegates of the American Medical Association:

The Council on Scientific Assembly held its regular annual meeting in Chicago, Nov. 6, 1926. In the interim before and after the annual meeting, the affairs of the Scientific Assembly have been conducted through correspondence.

ASSIGNMENTS FOR SECTION MEETINGS AT WASHINGTON SESSION

The meeting hours of the sections at the Seventy-Eighth Annual Session have been assigned as follows:

Morning	Afternoon
Practice of Medicine	Diseases of Children
Obstetrics, Gynecology and Abdominal Surgery	Surgery, General and Abdominal
Laryngology, Otology and Rhinology	Ophthalmology
Pathology and Physiology	Pharmacology and Therapeutics
Orthopedic Surgery	Nervous and Mental Diseases
Urology	Dermatology and Syphilology
Preventive and Industrial Medicine and Public Health	Gastro-Enterology and Proctology
	Radiology

ANNUAL CONFERENCE OF SECTION SECRETARIES

The regular annual conference of secretaries of the sections with the Council on Scientific Assembly was held in Chicago, Nov. 6, 1926. All but two sections were represented. Arrangements for the programs of all the sections and important matters in connection with the Washington session were considered.

This Council has done what it could to encourage the development of the Scientific Exhibit and collaboration between that department and the Scientific Sections. It is gratifying to note the growing tendency to use the Scientific Exhibit for the purpose of illustrating and elaborating papers presented before the sections dealing with important scientific subjects. The Council has also been much pleased to observe the development of exhibits prepared by individual sections of the Scientific Assembly which have constituted important features of the Scientific Exhibit at recent annual sessions.

Respectfully submitted.

J. SHELTON HORSLEY, Chairman.
E. S. JUDD.
ROGER S. MORRIS.
F. P. GENGENBACH.
J. E. LANE.
JABEZ NORTH JACKSON, President-Elect
MORRIS FISHBEIN, Editor, THE JOURNAL
OLIN WEST, Secretary
} Ex officio.

REPORT OF THE ADVISORY COMMITTEE ON TRACHOMA AMONG THE INDIANS

Since the last report, made to the House of Delegates in Dallas in 1926, your committee has had the opportunity of making some personal observations in regard to trachoma among Indians in different localities.

Last spring at the invitation of the National Committee for the Prevention of Blindness, Dr. Wilder in company with Dr. B. F. Royer, medical director of the National Committee, Dr. Holloway of Philadelphia, and Dr. Yudkin of New Haven, visited several of the reservations, schools and hospitals of the Indians in Oklahoma, particularly those near Lawton, Fort Sill, Anadarko and Pawhuska.

Last autumn, two other members of your committee, Dr. W. C. Posey and Dr. F. I. Proctor, visited and inspected some of the most important Indian schools and hospitals at Albuquerque, N. M., Fort Defiance, Ariz., and Riverside, Calif. They also visited a number of Indian villages, such as Santa Clara, Laquna and Acoma in New Mexico.

In these tours we had the cordial assistance of the Secretary of the Interior, Dr. Hubert Work, and the Commissioner of Indian Affairs, Mr. John H. Burke, who instructed the superintendents, agents and others to give us all necessary aid.

From what was seen, we got the impression that trachoma is not as widespread nor as severe in character among the Indians of Oklahoma as we expected to find it, judging from reports and accounts that had been read. This may be due to the improved physical conditions of housing and sanitation that have been brought about by the department.

However, among the Navajos and other Indians of Arizona and New Mexico the disease is much more prevalent and more severe. Here different conditions of life obtain. The majority live in cabins that are ill ventilated and unhygienic. Many of them live a nomadic shepherd's life, very primitive, and are exposed to the irritating dust of the desert, which would aggravate any eye disease that might be present.

It is estimated that 25 per cent or more of the Navajos and Pueblo tribes inhabiting this region have trachoma, which was seen in all stages and degrees of severity by the members of our committee.

Some years ago the government made the education of Indian children obligatory, and, when attendance at some day school was impossible, required residence in one of the Indian boarding schools. There are many such in the various Indian reservations, and our committee has visited a number of them, viz.: Fort Sill and Riverside schools near Lawton, Okla., and those at Albuquerque, N. M., Fort Defiance, Ariz., and Riverside, Calif.

From our observations, these schools are well equipped and well maintained. They are sanitary and clean, and every effort is made to prevent the outbreak or spread of disease. However, there are many cases of trachoma among the pupils and there can be no doubt that many children who were well when entering the school contract the disease while in residence.

The decision of the government to convert the school at Fort Defiance into a trachoma hospital school, transferring all children with well eyes to other schools where there is no trachoma and filling their places with children affected with trachoma, is much to be commended. Afflicted children will be kept in this school until cured and no longer capable of infecting others. At the same time they will receive as much educational and vocational training as the condition of their eyes allows.

This plan was put in operation, Jan. 1, 1927, and it is understood that it will be extended to other reservations if it is productive of expected good results at Fort Defiance.

As attendance at school is obligatory on the Indian children, the importance of this step cannot be overestimated, and the government is to be commended for its action.

Improved sanitation in living conditions and better habits of personal hygiene will do much to stamp out the disease. In the course of time, as successive classes of Indians are graduated from the schools where they receive instruction in hygiene, the manner of living of the Indians will be improved and conditions favoring the spread of trachoma will disappear.

In the meantime much can be done to educate the adult Indian, and we would recommend the extension of the *community center idea* at schools and trading posts, following the plan already adopted by the government, where the Indian may receive instruction in personal hygiene in his own language, preferably by graduates of the Indian schools or by Indian girls who have been trained as nurses.

Such persons or others interested in the work could be engaged as field workers who, if properly trained, would not only discover new or relapsing cases and send them to the hospitals, but would also aid in the after or home treatment presented by the doctors. The missionary work that such field workers could do in the way of teaching simple hygiene would be invaluable. We were impressed with the truth of this by the results we saw of the efforts of a devoted field worker near Anadarko, Okla.

The physicians of the Indian Medical Service whom we met seemed to be devoted and skilful. For the most part, their treatment of the disease is in our opinion wise and conservative.

Some time ago the government appointed three physicians of the Indian Medical Service to travel over the field and "clean up" the disease. We doubt the efficacy of such a campaign, for trachoma is a disease that demands continuous after-treatment and cannot be cured by one radical treatment, operative or otherwise. We would rather recommend the establishment of more special trachoma hospitals, better equipped but similar to that which the Indian Department has established at Albuquerque, where affected Indians who cannot be cared for in the schools may receive treatment.

We think the government has shown wisdom in securing the cooperation of Public Health officers to supervise the work of the Indian Medical Department, and also is to be commended for carrying on pathologic and bacteriologic studies to determine, if possible, the cause of trachoma.

ARNOLD KNAPP,
F. I. PROCTOR,
W. CAMPBELL POSEY,
WILLIAM H. WILDER, Chairman.

REPORT OF COMMITTEE ON NURSES AND NURSING EDUCATION

To the House of Delegates:

At the last session of the House of Delegates, held in Dallas, in 1926, the following resolution was adopted:

Resolved, That there is a great need throughout the country for a basic trained nurse, and that all pupil or student nurses shall receive basic training in training schools connected with hospitals giving courses of two years. The curriculum should be thoroughly revised so as to provide bedside instruction, class room lectures and demonstrations and, above all, the teaching of the art of nursing by precept and example so as properly to fit the pupils or students for their work as nurses in the hospitals and in the homes.

Graduates, after passing the state examination, should be registered as trained or, if preferred, registered nurses. Such trained or registered nurses may become public health or other specially designated nurses after being properly admitted to postgraduate schools for nurses and passing the required examination.

Resolved, That the Board of Trustees appoint a committee on nurses and nursing education to investigate and report to the next House of Delegates the results of its investigation and constructive thought on the nursing question and especially on the subject of increasing the number of bedside nurses throughout the several states; the Committee on Nurses to be empowered to confer with the National Nurses' Association, hospitals and other committees having similar objects.

The following committee was appointed: Dr. Frank Billings of Chicago; Dr. James R. Bloss of Huntington, W. Va.; Dr. H. M. Johnson of Dawson, Minn.; Mr. W. E. Musgrave of San Francisco; Dr. Stewart R. Roberts of Atlanta, Ga.; Dr. C. W. Waggoner of Toledo, Ohio, and Dr. N. B. van Etten of New York, chairman.

Your committee has actively studied the nursing question in the United States, in Europe and in Canada, has reviewed the history of nursing and the history of the various studies that have been made by committees from the American Medical Association, from state medical societies, from nurses' organizations and from other groups; and while your committee realizes that greatly duplicated effort has not led to a satisfactory solution, your committee feels that these efforts have not been really wasted because there has been collected a large body of opinion

and historical fact which may be of valuable assistance in guiding the evolution of the nursing service into channels of orderly, practical usefulness to the patient, who is our chief concern and to the physician, who is responsible for the care of the patient.

Although the geographic distribution of your committee has made frequent meetings impossible, a very lively round-robin correspondence has been carried on through the chairman, each member of the committee making six copies of his letters, so that all have been actively involved in the current discussion of all questions.

Your committee sustained a great loss through the death of one of its most valuable members, Dr. William E. Musgrave of California, whose reports on the nursing situation in California and the West and whose correspondence with many nursing agencies have been most helpful.

The following questionnaire was sent to the members of the committee, who in turn transmitted it to others in their sections of the country. The answers build up a mass of opinion which is worthy of respect, much of which is worth publishing, but which is too voluminous to appear in full at this time.

QUESTIONNAIRE

1. Is there a shortage of nurses in your part of the country? Is it as acute as it was five years ago? What is the reason for it?

2. What proportion of the nurses graduating from your hospitals become permanently located in the vicinity or continue as nurses?

3. What has been the average per capita cost of conducting your training schools during the past five years? How many girls have been in training during that time? How long in training? Are the classes full? How many fail to complete the courses, and why, and at what period of training?

4. Can you estimate the monetary value to the hospital of the service rendered by the students? Can you estimate the number of hours of actual bedside service during training rendered by pupil nurses? What is the percentage of time given to class room and study? How long is the period of training in your hospitals? Would you recommend readjustment of relative amounts of didactic and practical training? How?

5. What should be the minimum requirements for entrance to a training school?

6. Are you satisfied that the curriculum recommended by your state department of education is well adapted for properly training bedside nurses or for teaching the art of nursing?

7. How much school time is needed to develop a bedside nurse? How much for practice? How much for theory?

8. Give reason why more time should not be given to teaching the pupil the art of nursing by demonstration.

9. What is the smallest hospital, rated by number of beds, that you would consider competent to graduate the basic nurse?

10. Do you think a basic nurse can be graduated in two years or less? Do you think three years necessary to develop the basic nurse?

11. Do you consider the training of the basic nurse also a preliminary necessity for nurses who practice specialties such as public health or social service?

REPLIES

Other correspondence carrying additional questions has been current with every state in the union and with Canada, bringing much interesting discussion, from which your committee presents deductions which have influenced our arguments and recommendations.

A brief résumé and averaging of the replies to questionnaires and other questions from twenty-three states and two provinces reflects: (1) No shortage of nurses except in rural regions, an increasing supply during the last five years. (2) Fifty per cent of graduates remaining in the vicinity of their nursing schools. (3) The per capita cost of conducting training schools varying from $423 to $1,000. The classes usually well filled, an average of one third completing the training course. (4) Estimates of the monetary value of student nurses' service to the hospital varying from $600 to $1,080 a year. The hours of service rendered varying from 5,300 to 9,300. The percentage of class room and study averaging from 10 to 12 per cent. The period of training from two to three years. Nearly all favored readjustment of relative amounts of didactic and practical training. (5) Requirements for entrance to training schools ranging from grammar school to high school graduation. (6) Some find the curriculum satisfactory, some say "the curriculum is absurd." (7) Two years' average time needed to develop a bedside nurse. Ratio of practice to theory ranges from 12 to 1 to 2 to 1. (8) All agreed on the importance of teaching the art of nursing by demonstration. (9) From fifty to 150 beds in a general hospital needed to develop the basic nurse. (10) Most of the answers favored two years', many favored three years', training. (11) All believe that the public health and other special nurses should have the basic training also.

Other questions elicited answers which indicated a demand for several grades of nurses, but also reflected the fact that whatever the training no economic relief was given to the patient because nearly all charged the same fee, and the wide differences in opinion and statements of fact indicate that while each one of these subjects needs intensive detailed study, the most important work for any committee to attempt is seeking a way to distribute the present nursing supply to the consumer, the sick patient.

Dr. Stewart R. Roberts of our committee, after three months in Europe, reports his impressions in the following letter:

March 16, 1927.

My dear Dr. van Etten:

About December first, 1926, I wrote to you that I would send a summary on my return from Europe of my findings on the nursing problem pertaining to the work of this committee. Below is a summary of my impressions:

1. In Germany, two-year courses are offered to nurses which permit them to enter on nursing after this course of training is completed. If a nurse takes this two-year course and desires to be an obstetric nurse, she must take another year in obstetric nursing. Or, if she wishes her course to be a three-year course and include obstetrics, she may remain in training the full three years.

At the end of every five years the German nurse must take a postgraduate course in nursing from one to three months.

2. Ireland, Scotland and England pursue the three-year plan for a nurse's training except, if a nurse desires to be a fever nurse, which means to nurse patients with infectious diseases—typhoid, diphtheria, scarlet fever, et cetera—she must take an extra six months' course. Hospitals for infectious diseases are separate from other hospitals.

3. In Austria a régime similar to the German custom is pursued, except it seems that in Vienna a more rigid three year course is the law.

In these countries I notice two great differences between the nurse of our country and there. I am now speaking generally and not particularly. There are, of course, exceptions on both sides of the Atlantic. But in general the nurse in Europe is:

(*a*) Devoted to her calling as a profession, is exceedingly sympathetic and tender with the sick, and seems to lack the desire for rich dress or social ambition or the effort to use nursing as a stepping stone to marriage.

(*b*) The European nurse does not seem to look on nursing as a means to receive large fees, but rather to receive a comfortable living in which she is satisfied. For example, the fee for the private nurse in Europe is approximately three guineas a week, or about $15 in our money. It may run up, in very wealthy families, to from $20 to $25 a week. In instit tions the rates run from £40, £60 to £100 a year, which in American money would be $200, $300 and $500 a year with room, board and laundry.

The nurses in Ireland, Scotland, England and Vienna impress me as being far more interested in medicine and learning than the average nurse certainly is in the southern part of the United States. There is a devotion to nursing on their part, of itself and for itself. If the nurse receives a call to a case she considers it her duty to respond, whereas certainly in the South nurses refuse to nurse outside the hospitals with perfect independence or refuse to go outside the larger cities to the smaller towns.

(*c*) But there is a vast difference between the legal control of nursing in the states of our country and the legal control of nursing in countries above mentioned. For example, in my own state, Georgia, the laws of the state relating to nurses and nursing are formulated by the nurses' association itself — the Georgia Nurses' Association. They were easily put through the legislature, signed by the governor and became law. The nurses' examinations are given by the officers, who are nurses themselves, of the Georgia Nurses' Association, and the whole nursing problem is managed for, by and with nurses, whereas the very contrary condition prevails in all the countries I have mentioned. There may be one or two nurses on the nursing council in the Irish Free State or Scotland or England, but the laws are formulated by physicians who are the leading men in the profession—the internist, surgeon, etc., and other leading men of the profession forming this council or board, and from them come the laws, rules and regulations and not from the nurses themselves.

(*d*) Furthermore, there is a vast difference between the methods of examination. Three forms are given to a nurse by this nursing council. First a written, second an oral, and third a practical, examination. The examination for graduation is considered a very important event and it is not in the hands of the hospital but is usually held in the hospitals where opportunity is offered to see the conduct of the nurse in direct contact with the patient.

To summarize: Germany alone seems to feel the necessity for shorter courses for nurses.

The nursing profession in Europe is a devoted profession, and those fees are regulated by the council composed of physicians and not by councils composed of nurses, as in this country.

It is suggested as the result of the foregoing impressions that the committee consider three grades of nurses for the United States known, respectively, as one, two and three year nurses. The one-year nurse might well be known as a nursing aide, which would by custom soon be

known as an aide. The two-year nurse be known as assistant nurse, and the three-year as a graduate or trained nurse.

It is suggested that once every three years a nurse be required to take a month's postgraduate course at a recognized institution to be listed by this committee or by the Council on Medical Education and Hospitals of the American Medical Association.

It is further suggested that the physicians of each state take a more lively interest in the nursing situation and become members of the nursing boards, and that this committee suggest some such ratio between physician members and nurse members on those boards. And instead of ordinary state examinations that there should be a threefold examination of the one, two and three year nurses; oral, written and practical.

In discussing this matter with the superintendent of the Royal Infirmary at Glasgow, where Lister worked, we mutually reached the conclusion that, as a matter of fact and truth, the reason the nurse was primarily held in the hospital for three and four years (four years was the rule in this hospital in Glasgow), is that the hospital wanted from the nurse all the free work it could get in service to the patients. And if the hospital did not demand the long-time service and make a good trade to keep young women and by so doing nurse the patients at a less expense, the nurses could be trained just as well in from one to two years. To illustrate this point: In the United States a man receives a degree of doctor's training in four years, eight months' term to the year, or thirty-two months total, whereas a nursing degree requires three years of twelve months, allowing only two weeks' vacation a year, or a total of thirty-four and a half months. The medical student receives the higher degree in two and a half months' less time. It is the selfish demand of the hospitals for service on the part of nurses that has necessitated this apparently long training, and the training of the nurse herself has largely been a secondary matter.

Furthermore, large numbers of these girls in our country enter on training as a matter of financial necessity. They originate in the average community from homes without sufficient financial resources to enable them to take an expensive course of training in any other line of work and necessarily enter the hospital because the hospital furnishes room and board and a small monthly stipend.

Very truly yours,

STEWART R. ROBERTS.

Your committee reports active investigation carried on by every member of the committee of the economic, educational and ethical development and relationship of the nursing service and submits the following bill of complaints, statements of fact, arguments in support of suggested remedies, and recommendations.

COMPLAINTS

The public, representing the patient, complains of unsatisfactory service in details of personal care and household adjustment, and desires either the most highly trained and highly educated nurses or some helpful persons of sufficient intelligence to carry out ordinary directions for the care and feeding of the invalided or sick in bed.

The patient complains that he is unable to pay the salary of the first group, plus food, and cannot discover a sufficient supply of the second group at prices within his means.

The patient who is sick in bed twenty-four hours a day reports that he must either be able to pay $16 or $14 or $10 or $5 a day (plus food) for varying degrees of care or be hospitalized.

The patient who desires private nurses in private rooms in hospitals complains of being unable to avoid these maximum costs. A college professor recently reported his bill for private nurses in one of our large hospitals at $17 a day, $4 a day more than his income. The patient in the ward complains that he must go there with ten, twenty or forty others in order to be able to pay his way. The hospital cannot keep him through his convalescence and he returns to his home still needing nursing care that he cannot buy at a low enough price to be covered by the family budget.

Physicians complain that nurses are unwilling to serve every sort of patient, will not go to obstetrics, or contagion, or male patients, or babies, or night duty, or twenty-four hour duty, or by the month, or suburban patients, or go to the country, or prepare and serve patients' food, or keep the patient's room cleaned, or perform other comforting domestic service.

Physicians complain that some nurses are too highly educated to be nurses, are unwilling to follow the spirit or the letter of medical orders, substitute their own opinions for those already expressed by physicians, change or omit medication without seeking advice, assume undue responsibility, undertake diagnosis or treatment of minor cases, advise surgical measures, designate operators, and invade the field of the general practitioner.

Physicians complain that schools of nursing feed the nurses so much undigested theory and relegate so much practical work to servants that many nurses are quite unable to adjust themselves to homely conditions. One man says, "Your high class nurse does not know how to poach an egg."

Nurses complain of over-much menial labor, of exhausting work, of long hours, of excessive extra-nursing demands, of irregular living, of loss of social opportunity, of seasonal occupation, of an average of eight months' work out of the year, representing an average maximum wage, if they receive $8 a day, or $1,920 a year, that they reach this maximum immediately on graduation, if ever, and experience a diminishing scale of average employment to a little past their fiftieth year of age, when they are worn out and have failed to provide a future for themselves through savings or pension.

Forty per cent of them are planning to leave private duty nursing to enter public health or industrial or institutional nursing or commercial life for three reasons: (1) to secure regular yearly employment; (2) an eight hour day with regular vacations and Sundays and nights for rest and recreation, and (3) a prospect of providing for sickness and old age. They express no regret at leaving the household service of the rich but only an acute sense of loss in their financial inability to enjoy the privilege of serving the sick poor. They say they "love nursing" but cannot afford to continue it.

Your committee sympathizes with the complaints of the public representing the patient whose needs offer the immediate and most important reason for this study. Your committee believes that the complaints of the physicians are justified only by individual experiences in contact with unusual, atypical personalities that are occasionally met in all professions, even in the medical profession.

Your committee believes that the complaints of the nurses reflect the economic evolution of a group of workers sincerely trying to render the best possible social service. Our reports from large schools of nursing that their classes are well filled prompts us to ask why young women should enter a difficult and disappointing profession which their older sisters are leaving.

CURRICULUM

Your committee is not prepared to discuss the curriculum except to say that the general impression is that it is overloaded and that an effort should be made to reduce it to practical, simple nursing limits.

It would appear that the curriculum has been built up by specialists, each one rating his own line as the most important, always and forever adding, never pruning his course, until the result is almost unteachable.

We have just received an examination paper prepared by a physician as the final examination covering his course of sixteen hours in the nursing of mental and nervous diseases:

EXAMINATION

1. Name five different groups of psychosis.
2. What is the outstanding clinical symptom of manic-depressive psychosis?
3. (*a*) What are morbid fears called? (*b*) Define delusion, illusion.
4. What nursing procedures are necessary in this group?
5. What do you understand by a psychopathic personality?
6. Name the inhibitor or brake in: (*a*) visceral level of the nervous system; (*b*) sensory motor level of the nervous system; (*c*) psychic level of the nervous system.
7. Define: (*a*) Romberg's sign; (*b*) Argyll Robertson pupil.
8. What are the characteristic signs of a lesion in the upper neuron of the nervous system?
9. (*a*) Describe a reflex arc. (*b*) Name three parts to a reflex arc.
10. Name a disease of the peripheral nervous system.
11. Name a disease of the lower motor neuron.
12. What is the function of the third cranial nerve?
13. What sort of impulses do the (*a*) posterior nerve roots of the cord carry? (*b*) Anterior?
14. Describe the following: (*a*) Ataxic gait. (*b*) Spastic gait.
15. Is Bell's palsy a central or a peripheral disease, and what nerve is affected?

Any graduating nurse who can pass this paper seems to us to have passed beyond the boundaries of nursing into a field which is very close to the practice of medicine.

Revision of the curriculum should be attempted, but only by the concerted action of physicians and nurses and practical educators who are neither physicians nor nurses.

SUPPLY OF NURSES

A study of the supply of nurses reveals no shortage for the country as a whole, an abundant supply for cities, and

faults of distribution seriously affecting rural districts. It would seem that no artifice could be devised to correct this condition; 57 per cent of our people are urban and the population will continue to flow to and from towns following purely economic leads. Strategically placed hospitals and good roads would seem to be the only relief available for the rural districts.

Using our study in the state of New York as illustrative and because we have more completely detailed information from New York than from other states, we quote from a census of nurses in the state of New York and the distribution of nurses' services, dated Jan. 12, 1927. Nurses are classified as follows: student nurses; private duty; institutional; executive; public health; industrial; school nursing; district visiting; tuberculosis; maternity. Seventy-eight per cent of the total are student nurses, private duty and district visiting nurses, all giving bedside nursing care. Outside this census are a large number of nurses who have graduated from schools of nursing in other states and are not registered in the state of New York, who are carrying on their profession through commercial registries, private hospitals, and so on, and the hundreds of so-called undergraduate and practical nurses who are given some sort of nursing care. It is safe to estimate that there is at least one person to every 200 of the population of the state of New York practicing with the title of nurse or attendant. There is no shortage of nurses in the large cities. The county of New York has one registered nurse to every 217 of its population.

The accompanying table, made from official records, shows the number and distribution of registered nurses by counties in New York State and the ratio of nurses to population.

Investigation seems to show that the nursing problem is concerned not so much with supply and demand as with distribution and economics. As one man said, there is no lack of nurses, but a lack of people who can afford to pay for their services. This does not mean that the registered nurse is overpaid: it means simply that the nursing service provided does not meet the nursing needs of the patient. While the doctors complain of a nursing shortage, the nurses say they are idle during a quarter of their time. There is evidently a lack of coordination somewhere.

In recent years the supply of bedside nurses has been decreased by the fact that many nurses go into special fields. Some nurses have also limited their services by selecting types of duty rather than being willing to work whenever and wherever called. Moreover, there is a great deal of luxury nursing. A registered nurse is called for a mild case of illness or is retained as a companion after the need has passed. She is called to care for children while the mother goes away. The appreciation of the personal care of the patient has increased, and the physician orders a nurse without regard as to whether or not the patient is able to afford one. The family, anxious under the strain of illness, wishes to leave nothing undone that might make for the patient's comfort. Or perhaps the nurse is employed simply as a matter of social prestige. It is true

Distribution of Nursing Service in New York State, Jan. 12, 1927, Based on Number of Annual Registration Certificates Issued to Date

Counties	Population	Student Nurses	Private Duty	Institutional	Executive	Public Health	Industrial	School Nursing	District Visiting	Tuberculosis	Maternity	Total	Ratio
Albany	197,138	143	263	77	39	18	9	15	13	6	12	595	1 : 331
Allegany	38,815	0	15	5	3	2	10	1	2	0	0	38	1 :1,021
Bronx	872,168	221	149	91	22	7	3	9	20	20	4	546	1 :1,597
Broome	135,060	103	143	79	23	3	21	12	7	3	18	407	1 : 331
Cattaraugus	73,778	27	50	25	10	27	0	3	1	4	1	148	1 : 498
Cayuga	65,344	31	84	18	3	0	3	2	3	2	1	147	1 : 444
Chautauqua	128,160	37	112	27	11	6	2	5	7	4	1	222	1 : 577
Chemung	72,292	121	103	30	11	7	4	5	6	3	1	291	1 : 248
Chenango	35,610	0	17	7	1	1	0	1	0	2	0	29	1 :1,227
Clinton	46,145	62	57	15	8	3	2	2	1	0	1	151	1 : 305
Columbia	42,726	37	30	11	6	1	1	3	2	5	0	105	1 : 406
Cortland	31,051	32	66	9	1	1	0	2	1	1	1	114	1 : 272
Delaware	43,452	0	10	1	0	0	0	2	1	0	0	14	1 :3,103
Dutchess	99,028	110	114	88	10	8	3	12	4	4	3	361	1 : 274
Erie	693,616	672	659	284	98	16	36	36	50	13	15	1,879	1 : 368
Essex	32,042	30	29	21	5	1	1	1	1	12	0	101	1 : 317
Franklin	45,915	15	30	13	12	3	0	3	0	24	0	100	1 : 459
Fulton	46,028	24	65	6	4	1	0	4	3	0	1	108	1 : 425
Genesee	43,420	0	29	11	2	0	1	2	3	1	2	42	1 :1,033
Greene	28,207	0	13	1	0	0	0	2	1	1	0	18	1 :1,567
Hamilton	4,242	0	0	0	0	0	0	0	0	0	0	0	0
Herkimer	66,708	16	43	17	7	4	5	4	2	6	1	105	1 : 635
Jefferson	85,776	70	99	35	20	1	1	3	1	2	4	236	1 : 363
Kings	2,293,991	861	1,403	464	191	43	80	58	90	26	33	3,252	1 : 677
Lewis	21,713	0	3	1	0	0	0	0	0	0	0	4	1 :5,178
Livingston	39,264	15	11	15	9	2	0	1	1	0	1	55	1 : 713
Madison	40,807	20	30	8	1	3	1	4	0	0	0	67	1 : 609
Monroe	392,174	419	465	173	75	23	34	58	25	10	7	1,289	1 : 304
Montgomery	61,385	41	47	13	12	3	3	9	1	2	2	130	1 : 441
Nassau	207,040	39	151	22	27	2	0	28	9	1	6	265	1 : 783
New York	1,945,029	1,613	4,581	1,299	717	151	169	88	178	65	93	8,994	1 : 217
Niagara	133,437	85	84	38	16	0	22	8	1	3	4	261	1 : 511
Oneida	196,486	223	215	103	28	9	12	8	13	5	2	647	1 : 303
Onondaga	276,009	321	273	86	33	25	14	24	18	0	7	861	1 : 320
Ontario	55,240	150	129	35	12	1	2	1	3	2	3	338	1 : 163
Orange	125,029	62	126	59	16	6	3	11	3	2	3	291	1 : 431
Orleans	30,692	0	3	7	1	1	0	1	0	0	0	13	1 :2,360
Oswego	71,404	31	43	15	4	1	6	2	1	5	3	111	1 : 643
Otsego	37,404	0	45	21	2	0	3	0	3	1	0	75	1 : 498
Putnam	12,500	0	6	5	0	1	0	3	0	0	0	15	1 : 833
Queens	713,891	152	300	78	49	14	20	15	18	18	7	671	1 :1,063
Rensellaer	118,429	170	166	30	17	7	5	5	6	3	3	412	1 : 287
Richmond	138,277	33	70	55	12	5	5	10	14	10	6	200	1 : 691
Rockland	36,479	0	21	12	4	0	1	5	1	0	0	45	1 :1,255
St. Lawrence	91,805	141	54	41	5	3	1	3	1	0	4	253	1 : 362
Saratoga	65,606	34	56	16	6	0	5	3	3	1	0	124	1 : 529
Schenectady	116,708	67	127	17	7	5	4	16	5	7	3	258	1 : 452
Schoharie	21,565	0	2	2	0	1	0	2	0	0	0	7	1 :3,080
Schuyler	13,456	0	3	3	0	1	0	0	1	0	0	8	1 :1,682
Seneca	25,363	34	26	68	8	1	0	0	0	1	2	140	1 : 181
Steuben	82,175	36	62	28	5	2	2	4	4	1	2	146	1 : 562
Suffolk	143,296	60	73	158	25	0	1	18	0	3	3	335	1 : 427
Sullivan	40,192	0	8	5	0	0	0	1	0	4	0	18	1 :2,232
Tioga	26,111	0	12	0	0	4	0	0	1	0	0	17	1 :1,535
Tompkins	39,559	47	61	19	10	2	3	5	1	0	3	151	1 : 261
Ulster	88,052	50	83	19	2	4	0	6	0	1	1	166	1 : 500
Warren	34,070	36	61	7	3	3	0	1	4	2	0	117	1 : 291
Washington	46,661	9	20	12	1	2	4	4	1	2	3	58	1 : 804
Wayne	51,785	0	7	6	0	2	1	2	0	1	0	19	1 :2,725
Westchester	425,798	228	475	159	88	19	8	45	35	10	11	1,078	1 : 394
Wyoming	30,827	0	6	2	2	1	0	0	1	0	1	13	1 :2,371
Yates	17,668	0	18	6	1	0	0	1	1	0	0	27	1 : 654
Total	11,102,151	6,791	11,519	3,935	1,685	460	508	583	567	300	273	26,624	1 : 419

now as in the past that the people who can afford servants can also afford nurses. It is largely the white collar man who for economic reasons is without a nurse and is complaining. Is some of the apparent shortage due to the changing conditions of the past ten years which have so squeezed his salary that the cost of a nurse is practically prohibitive?

HOURLY NURSING

Hourly nursing offers a partial solution of the problem, a solution that has as yet hardly been tried except among the very poor. That paid hourly service at reasonable rates is professionally practical and socially respectable is an idea that physicians would do well to foster among their patients. By this means the patient is saved the salary of a full-time registered nurse and the nurse is released for more necessary duties. Organized hourly nursing should prove most satisfactory also from the nurse's point of view, as it will provide her with more regular work at definite hours with regular pay and provision made for vacations and time off.

In connection with the extension of hourly nursing, we might do well to study the activities and practical operation of the visiting nurse associations. Hourly nursing is not at all a new idea; it has simply never been widely developed among the people who are able to pay. With the poorer classes this type of nursing service has been in successful operation for years and the mechanism for handling the work has already been developed and tested in actual practice.

In the official registries in Buffalo, Brooklyn, Chicago and Detroit hourly nursing is now being offered and is utilized to some extent, but the public has not yet come to understand and appreciate the value of this kind of nursing and so it has been very little in demand. If the physician will explain the hourly service to his patients and assist them to make use of it in suitable cases, the public will gradually become accustomed to the idea and take it as much for granted as it now does the twenty hour or twelve hour nurse.

A considerable part of the work of many visiting nurse associations is done in cooperation with insurance companies. Initiated by the Metropolitan Life Insurance Company in 1909, this service has spread to almost every state in the union and has been attended by very satisfactory results on both sides, to the company and to the policy holder alike.

SUBSIDIARY NURSES

Another possible factor in the solution of the question is some form of nursing aide. There is a weight of evidence to support the opinion that a subsidiary nurse is greatly needed, though the trained attendants provided for by law in some states do not seem up to the present time to have supplied the need. One reason for this is that not enough women have taken the training as yet to make any appreciable difference. Evidently something must be done to make the field more attractive. The chief difficulty, however, is that the attendants in many cases practice independently after graduation at nurses' fees. This practice, of course, must be stopped. It has been suggested that the highest weekly rate for a trained attendant should be $25. The most feasible way of regulating this and other matters is probably through central official registries.

OFFICIAL REGISTRIES

Here is the most immediately practicable tool for attacking the whole problem, one that has already been successfully tried in Buffalo, Brooklyn, Chicago and other places. Here is an agency through which all classes of nursing service may be honestly dispensed according to need. The registered nurse may find private duty, institutional or public service work, or hourly nursing; the nursing aide may be kept busy in the line for which she is really suited at a fee appropriate to her training; and undergraduates, graduates of unregistered schools and practical nurses all may be properly cared for.

A bill has just passed the legislature in New York and has become law with the approval of the governor, providing that nurses' registries shall give to the applicant and send to the employer a card stating the salary and qualifications of the applicant, thus safeguarding the public and the registered nurse against abuses arising from the demand for high salaries by unqualified persons.

The text of the amendment reads as follows:

> The term "nurses' registry" means and includes the business of conducting any agency, bureau, office or other place for the purpose of procuring, offering, promising or attempting to provide employment or engagements for nurses of any kind, or any place used as a lodging house for nurses, the keeper of which receives telephone calls or messages of any kind relative to the employment of such nurses and transmits such messages or calls to a nurse lodging in his or her house.
>
> Every nurses' registry that sends out any person to render nursing service shall give to each applicant and also send to the employer of such person within twenty-four hours of the time of employment a card stating the salary and qualifications of the applicant, also the name and place of the hospital and the length of time of service therein, or other experience in nursing if not in a hospital, and whether such person is a graduate, trained, certified, registered, undergraduate, or practical nurse, or trained attendant and if a graduate, trained, certified, or registered nurse or trained attendant, there shall also be stated on such card the number of the annual registration certificate issued to such nurse or trained attendant by the regents of the university of the state of New York for the current year and a copy of such card left on file for reference in the agency.
>
> In registering any graduate nurse or trained attendant such nurses' registry shall place on its file a statement showing the number and date of the last annual report of such nurse and trained attendant as shown by the annual registration certificate issued by the regents of the university of the state of New York. Such file records so kept by such nurses' registry shall be open to inspection by any authorized agent of the university of the state of New York and such agency shall submit the list in full upon request of such agent.

The law is especially in the interest of the public which employs the nurse.

The law is also in the interest of the physician, who has assumed a responsibility in advising or insisting on nursing care, and who will have some reasonable assurance by credentials that his directions will be faithfully carried out according to the ability of the certified person who will be sent from the certified registry. In fact, the law is a step toward officially controlled certified registries which may prove a most practical help in the solution of the nursing problem.

Moreover, an official registry under a competent, well paid, socially minded nurse who knows from personal experience the details of nursing procedure can do a very valuable work along the line of supervision. Nurses are almost the only group who go out from their preparation at the age of perhaps 21 and practice thenceforth without any supervision and without being permanently responsible to any one. A properly organized central official registry might do much to improve the morale of the profession.

GOOD NURSING

Another important way to increase the available supply of nursing service is through group nursing in hospitals. This has already been successfully tried in some cases, and where the experiments have not been successful the failure was not due to any inherent impracticability in the plan but in most cases to unreasoning prejudice. There is certainly no practical reason why one nurse should not care for three convalescent patients in adjoining rooms, thus reducing the patient's charge and increasing the available supply of nurses by two. If the nurses, physicians, hospitals and patients will make an honest attempt to cooperate on this point, there is no question but that the result will be satisfactory to all concerned.

As nursing service becomes better distributed, the present supply of nurses will reach farther. What is true of the question of supply and demand today will not, we hope, continue to be true. Good nurses will always be said to be scarce, for they will always be the ones whose services are most in demand; but as long as nurses complain of a large amount of unemployment, it hardly seems possible that there can be any widespread shortage except in times of unusual sickness. Employment in this field will always have a seasonal curve, but the same may be said of farming, building and even the practice of medicine.

Is it not the most important duty of this committee to make immediate efforts toward the better distribution of the nursing service already available? Let us repeat that no untried innovations are being urged. Hourly nursing has been proved feasible by the visiting nurse associations. It is no more difficult to organize and district a city for privately paid visits than for free or contract ones. Let this work be extended to those who are able to pay for the amount of nursing they require but who cannot afford the full time of a registered nurse.

Group nursing has always been done in wards, and one *student* nurse has been expected to care for from five to eleven

patients. Surely a *graduate* ought to be able to care for three in adjoining rooms. Or must the patient choose between a ward bed and a private room with two special nurses? Is there to be no other alternative?

THE BASIC NURSE

The chairman has submitted the following definition of a basic nurse to be trained in two years which has met with wide approval:

The basic nurse is a graduate who has completed a general hospital training school course in the theory, practice and art of nursing in two years, is fitted to nurse patients either in a hospital or at home, and is eligible for the degree of Registered Nurse.

But if there is no general shortage of nurses, is there any point in recommending for the registered nurse a course of training shorter than twenty-eight months? Various physicians who have been questioned on the subject recommend periods of training ranging from eight months to three years, with a majority favoring the twenty-eight months' course already adopted in several states. Many instances can be cited to prove that the number of applicants increases not as the standards are lowered but as they are raised. The quality of course is improved. It is true that some physicians feel that too much education diverts the nurse's attention from the personal needs of the patient and causes her to usurp the physician's prerogatives; but is this not a matter of the individual reaction of a particular nurse? Some one has said that nurses are not overtrained but overeducated. A better social adjustment might be promoted by a constant insistence throughout the course on teaching the art of nursing by demonstration while less attention is paid to the purely didactic side. Those who do not favor a shorter course declare that the didactic content of a two years' or a three years' course is practically the same, but the extended period of actual bedside work is what makes the difference between a really good nurse and a merely ordinary one.

It is interesting to note that in twenty-five states a three years' course is required by law, and in three of these states, Maryland, Oregon and Utah, the student nurse must also have graduated from high school before she enters the training school. Three states require twenty-eight or thirty months in training, and eighteen require two years, while five state that the nurse must be a graduate of an approved training school. Twenty-one states require that the student nurse shall have had one year high school, sixteen states two years, and five require high school graduation; while three states stipulate the completion of a grammar school course only, and six have even lower requirements.

There remains always the open question whether a subsidiary nurse can be or should be provided for the care of mild or chronic cases. It has been suggested that possibly the older nurses might care to undertake chronic cases at a smaller rate of pay in view of the more steady employment.

RECOMMENDATIONS

Your committee submits the following recommendations:

1. That the business law relating to nurses' registries in all the states be amended in a manner to conform to the new law in the state of New York.

2. Recognizing the county as the most practical field unit, that official nurses' registries be established in every county of every state.

3. That every county society develop plans for the official approval of registries which meet satisfactory standards to be erected by the county society.

4. Sincere efforts toward the coordination of all nursing services.

5. Endorsement and encouragement of visiting nursing service.

6. Thorough trial by the members of the American Medical Association of hourly or part-time nursing with broad publicity of its methods and possibilities.

7. Group nursing in hospitals.

8. That the period of training be twenty-eight months, the first four months to be devoted to concentrated study of fundamental anatomy, bacteriology, physiology, chemistry and dietetics, and that the succeeding two years be devoted as far as possible to teaching the art of nursing by demonstration, participation and practice.

FRANK BILLINGS.
JAMES R. BLOSS.
C. W. WAGGONER.
H. M. JOHNSON.
STEWART R. ROBERTS.
N. B. VAN ETTEN, Chairman.

AMENDMENTS AND RESOLUTIONS TO BE SUBMITTED AT THE WASHINGTON SESSION

1. AMENDMENT TO THE CONSTITUTION

Amend Article 10 of the Constitution so that it shall read:

The House of Delegates and the Scientific Assembly shall meet annually at times and places to be fixed by the Board of Trustees. A session may be held at any place in the United States

This proposed amendment was submitted by the Reference Committee on Amendments to the Constitution and By-Laws at the Dallas session in 1926.

2. AMENDMENT TO THE BY-LAWS

Amend Chapter IV, Section 4, of the By-Laws to provide for the election of officers as the fifth item on the order of business at the meeting of the House of Delegates on the fourth day of the session (Thursday), so that the order of business shall be:

1. Supplementary Report of Committee on Credentials.
2. Roll Call.
3. Reading and Adoption of Minutes.
4. Supplementary Reports of Board of Trustees, Councils and Committees.
5. Election of Officers.
6. Nomination of Standing Committees.
7. Election of Honorary, Affiliate and Associate Fellows.
8. Selection of Place and Fixing the Time for the next Annual Session.
9. Unfinished Business.
10. Adjournament.

The notice was given at the Dallas session by Dr. Horace M. Brown, delegate from Wisconsin, that the foregoing amendment to the By-Laws would be offered at the Washington session.

3. RESOLUTION ON HEROIN

Dr. S. M. Blackshear, delegate from Louisiana, has signified his intention to submit the following resolutions adopted by the Louisiana State Medical Society for official action by the House of Delegates at Washington:

There was passed by the Congress of the United States in 1909 "An act to prohibit the importation and use of opium for other than medicinal purposes" and amended in 1914 by what is popularly known as "The Harrison Act." which act has had numerous further amendments, including H. R. 7079, approved June 7, 1924, entitled "An act prohibiting the importation of crude opium for the purpose of manufacturing heroin"; this last amendment depriving us, as it does, of one of our most useful drugs in medical and surgical practice, and which was passed, most probably, without reflection of what the deprivation would amount to; therefore be it

Resolved, By the House of Delegates of the American Medical Association, in annual session convened at Washington, D. C., May 16, 1927, that whereas, authorities agree that the narcotic evil is almost wholly a police, rather than a medical problem; and whereas, from past experience with laws of this nature we feel that the drug addicts will continue to get their supplies of heroin unless they be dealt with in other fashion, and that, therefore, the sufferers from this proscription will be the physicians and surgeons in their legitimate practice—therefore, the Congress of the United States be and is hereby petitioned, through our Senators and Representatives, to repeal said amendment (H. R. 7079), that each of our Senators and Congressmen be furnished a copy of this resolution, with the appeal to help us free ourselves from the bonds of too many restrictions in our work; further, be it

Resolved, That the proper officials of the American Medical Association be requested and instructed to bring up this subject matter for consideration before the proper authorities of Congress, with the object in view of having the above actions of the House of Delegates properly executed, and made into law.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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SATURDAY, APRIL 9, 1927

THE COMMISSION ON MEDICAL EDUCATION

The first report of the Commission on Medical Education,[1] representing general education, the basic sciences, clinical teaching, public health, the medical profession and medical licensure, brings to light much valuable information for those interested in any of these fields. The problem of the day is to place adequate medical service within the reach of the large body of population of moderate means in this country. The character of medical practice is being modified by the growth of our knowledge, by specialization, by increasing emphasis on early diagnosis and treatment, and by the expansion of hospital and dispensary services. The inroads of contract practice, industrial medicine, social welfare work, visiting nurse service and similar new developments, have seriously affected the life and the income of the medical practitioner. The growth of preventive medicine has changed the nature of medical practice by eliminating a vast amount of morbidity which used to demand most of the time and energy of the practitioner. The Commission on Medical Education therefore considered its first duty to be an actual determination of the needs of the community for medical care, in order that these demands might be kept in mind in shaping the medical curriculum of the future.

A general practitioner in a town of fifty thousand population or less has his practice divided 55 per cent in the office, 35 per cent in the patient's home and 10 per cent in the hospital. About 75 per cent of the office visits involve minor surgery, upper respiratory infections, general medical care and venereal diseases. Ninety per cent of the home visits were found to be for infections of the respiratory tract, general medical and contagious diseases, obstetrics and minor surgery. In the hospital work 55 per cent was surgery, 30 per cent medical disorders and 15 per cent obstetrics. Indeed, over 90 per cent of the illnesses seen by general practitioners were found by the commission to concern conditions which could not be controlled on a community basis but which demanded individual, personal attention. The great campaign for prevention of disease rather than cure has apparently not yet affected greatly the nature of ordinary practice. Actually, the vast majority of patients seek physicians for the relief of symptoms—pain, insomnia, shortness of breath, accidents, malaise, fatigue, cough and similar disturbances—rather than for health advice. Such work as regulation of infant feeding, correction of physical defects not causing immediate symptoms, and advice in personal hygiene and in family health matters, does not yet command a considerable portion of the time of the general practitioner.

The second section of the report emphasizes the now well established fact that a large number of adults as well as children suffer from remediable defects, which are important factors in health but which are not controlled because both the public and the medical profession still require education as to the desirability of preventive rehabilitation.

As was noted by other investigators in previous reports on this topic, much attention has been given to problems of distribution of physicians and specialization. Recent graduates in medicine are locating in the cities and going into the specialties in increasing proportions. While the present situation is not considered alarming, many communities will be without a resident physician if the current trend continues. Nevertheless the commission feels that good medical service will be available if the people are able and willing to pay the extra costs for securing medical service from a distance and if the roads are made passable throughout the year. Those of limited or moderate means in small and rural communities are the people who will suffer if the present trend in medical distribution continues. The commission feels convinced, finally, that any attempt to secure distribution at the expense of proper preparation for medical practice will eventually fail to meet the situation satisfactorily.

Among other problems given special consideration by this well selected group are the number of medical colleges in the country, the supply of prospective medical students, the manner in which licensure laws influence the curriculum, and the outlook for the future. Moreover, such topics as graduate medical education, the bringing of the practitioner to his rightful place in the great program of public health, special problems associated with increased knowledge of mental and behavior disorders, and the broadening scope of medical research are indicated as appropriate for study in the future.

The traditions of medicine have made the profession distinctly one of service. Perhaps for this reason

1. The Commission on Medical Education consists of the following members, representing various organizations: A. Lawrence Lowell, chairman, Walter L. Bierring, George Blumer, Hugh Cabot, Samuel P. Capen, William Darrach, David L. Edsall, Sir Robert Falconer, Henry G. Gale, Michael F. Guyer, Walter A. Jessup, Lafayette B. Mendel, William Allen Pusey, Olin West, Ray Lyman Wilbur, Hans Zinsser, Willard C. Rappleye, director of study, and Fred C. Zapffe, treasurer. The director may be addressed at 215 Whitney Avenue, New Haven, Conn.

physicians have always been loath to consider seriously or comprehensively the economic problems associated with medical practice. Nevertheless, as the commission points out:

> The medical profession has a direct interest in certain economic and social problems. The rising cost of medical care is arousing the interest of economists and others and is receiving attention by the medical profession. The increasing cost is partly due to the rise in all commodities and services since the World War, but probably the largest element is the enormous expansion in our ideas of what constitutes adequate services and in the subdivision of medical practice into specialties. Our present conception of medical care requires many supplementary features, especially for the obscure illnesses which require hospital, laboratory, x-ray or other studies, and for the hospital care of patients with serious illnesses. These and other factors are tending to put present-day care and treatment out of reach of many individuals and families and indicate the necessity of adaptions of practice to meet the conditions.

Physicians will be able to guide the trend in medical practice and to protect the interests of the public, as well as their own interests, directly in proportion to the amount of consideration that they give to these problems in medical organization.

TYPHOID IN THE LARGE CITIES OF THE UNITED STATES

The fifteenth annual survey of typhoid mortality, published elsewhere in this issue, bears testimony to the remarkable improvement in typhoid rates which has occurred in the large cities in this country since these summaries were first undertaken. Data are available throughout the whole period for fifty-nine cities, which in 1910 had a population of 21,125,340 and in 1926 an estimated population of 29,784,917. Despite this population increase of over eight million, the actual number of typhoid deaths fell from 4,143 in 1910 to 822 in 1926, and the rates per hundred thousand of population from 19.61 to 2.76. If the rate that prevailed in 1910 had been maintained in 1926, the number of typhoid deaths would have been 5,840, or more than 5,000 deaths in excess of the number actually recorded. Since a material reduction in typhoid case fatality rates has not occurred during this period, these figures mean that probably 50,000 cases of typhoid, which would have occurred in our cities in 1926 if the 1910 rate had continued, were prevented. This record is an eloquent tribute to the increasing efficiency of American sanitation.

The decline in typhoid in the large cities is probably representative of a similar decline in the general population. The mortality experience of the Metropolitan Life Insurance Company, covering more than 17,000,000 policyholders, shows that 1926 was marked by the lowest typhoid rate on record in this group (4.2), although this rate is naturally not so low as that for the exclusively urban group (2.76).

It is somewhat surprising that after a period of four years during which marked typhoid reduction did not take place, a distinct increase even occurring in 1925, a rather substantial decline should be reported in 1926, marking indeed a drop of more than 10 per cent below the previous low rate. The fact that this decline was manifest in seven of the eight geographic divisions of the United States may have important epidemiologic implications and is at least worth noting as confirmation of the widespread belief in special "typhoid years."

Great as the improvement has been, let us hope that it is only an earnest of what is to come. Our city typhoid rates still average considerably higher than the rates in a number of European cities. The recent epidemiologic reports of the Health Section of the League of Nations, although not covering exactly the same period, show that in the large cities of England and Wales (with a total population of 19,474,270) the typhoid rate for 1926 was only about 0.7, the rate for London being about 0.6 and that for Birmingham still less (0.45). The German cities as a whole did not do so well, the typhoid rates for forty-six cities (population 16,746,000) being about 2.7. This relatively high rate was due in large part to an unusual prevalence of typhoid in a certain district in Germany in September and October, 1926. The Berlin typhoid rate in 1926 was but little higher (0.8) than that of London, and the Munich rate was lower. There is therefore every prospect that a further shrinkage in typhoid mortality can be brought about in the large cities of the United States, although the progress may not be at so rapid a rate in the future as it has been in the past. Urban typhoid mortality in the British Isles has reached a point not quite half what it still is in the best geographic division of the United States.

THE INDIVIDUALITY OF CHOLESTEROL

The organic compound cholesterol has long obtruded itself on the attention of those who are interested in the medical sciences. Thus, it has been recognized as a probable constituent of all animal cells—a fact which of itself contributes to the substance the dignity of a presumably essential component of living matter. The nervous system is replete with cholesterol, so that the biochemical student is accustomed to prepare it in abundance from brain tissue as a familiar laboratory exercise. What the possible significance of this unique concentration of the lipoid in the nervous system may be remains obscure, though long challenging attention. Cholesterol occurs in the bile, where its presence occasionally leads to the development of gallstones and thus excites the interest and curiosity of the surgeon and the pathologist. The genesis of cholesterol and calculi remains today as a topic that is still debated.

The circulating blood contains cholesterol esters in the plasma, while the alcohol itself is represented in the red corpuscles. Here it is assumed to protect the erythrocytes against the action of hemolytic substances which, unless counteracted, might tend to cause anemia through excessive hemolysis. Cholesterol is believed

to be concerned in various immunologic reactions, though its functions therein cannot at present be clearly defined. Sherman points out that as a constituent of waxes and the sebum of the skin it protects the dermal structures; it, or its degradation products, aids the other lipins in giving to cells their power of holding large quantities of water without dissolving or losing their peculiar semifluid characters. The newest interest in cholesterol arises from the discovery, made independently by Hess and Steenbock in 1924, that cholesterol, under the influence of ultraviolet rays (from direct sunlight or artificial sources such as the mercury vapor quartz lamp), may be so changed as to acquire the property of "antirachitic vitamin." Consequently, the presence of cholesterol in the skin also acquires a new and greatly enhanced significance from the discovery that it may be changed by irradiation into an important vitamin.

The interest in cholesterol is further complicated by the circumstance that the question of its origin in the animal organism has not been settled. It has already been pointed out [1] that there are some indications of a possible synthesis in the body; there is likewise evidence that the related plant sterols can be utilized and that in some manner somewhere in the body phytosterol is changed to the isomeric compound cholesterol, which varies from the former only in physical properties. The plant sterols have lately been found to exhibit considerable variations in both physical properties and composition. Accordingly, it seems unlikely from purely chemical considerations that such diverse complex organic substances could all be readily changed in the body to a single cholesterol. The evidence of crystal form usually depended on to insure proof of purity and identity cannot be relied on when the possibility of a number of isomeric cholesterols in animal fats is to be reckoned with.

Anderson [2] of the Geneva, New York, Agricultural Experiment Station, who has had unusual experience in the investigation of sterols, now calls attention to the fact that cholesterol preparations obtained from different sources show slight differences in physical properties. He remarks that if cholesterol is formed from plant sterols, a number of different as well as isomeric cholesterols might be expected to occur in animal fats corresponding to the various phytosterols contained in the plant material that serves as food. The existence of numerous isomeric compounds of a familiar substance is not surprising; indeed, it may contribute to the possibilities of biologic specificities. It may be recalled that such seemingly individual compounds as the blood and milk proteins show a biologic specificity, exhibited in their anaphylactic responses, which the chemist has not been able to unravel on the basis of composition, though he does not question the existence of some sort of chemical differentiation in such antigenic substances. The existence of isomeric cholesterols might help to explain various sorts of slight biologic differentiations.

1. The Origin of Cholesterol, Current Comment, J. A. M. A. **84**: 41 (Jan. 3) 1925; The Synthesis of Cholesterol in the Body, ibid. **85**: 1066 (Oct. 3) 1925; Cholesterol Metabolism in Infants, ibid. **86**: 629 (Feb. 27) 1926.

2. Anderson, R. J.: Properties of Cholesterol Obtained from Different Sources, J. Biol. Chem. **71**: 407 (Jan.) 1927.

Current Comment

THE MEDICAL "WE"

In medical addresses before the public and in medical literature, the word "we" is probably more abused in its usage than any other terms, not excluding the words "case" and "patient." There is, perhaps, an unusual dignity attaching itself to the employment of the magniloquent "we"—an impressiveness that is conveyed by the understanding that its use involves the concerted opinion and action of 150,000 physicians. Unfortunately, however, the word often means neither 150,000 physicians nor all the physicians in the county society, the hospital staff or even the department of the hospital. In a recent incident, a physician stated in a report that "we" have discarded this method of treatment. According to the style adopted by the American Medical Association the term "I" was substituted, and the physician was asked to explain who might be involved by the "we" in case he wished to use it. Subsequent correspondence revealed the fact that the "we" did not concern even all the members of the department of the hospital from which the paper appeared but actually only the author himself. Here is clearly the conveying by the wrong use of a word of an impression that was not warranted by the facts and which was distinctly an unscientific impression. If the word "we" is used, the antecedent should be clearly apparent, so that the individuals concerned are definitely determined.

JUVENILE "SUICIDE WAVE"

> Any one who knows the news field in this country is well aware that it is a simple matter to create stories of alleged general conditions by associating isolated cases picked up by wire among the people of the country. If all the cases of legs broken by short falls among more than a hundred million people should be connected in the news daily for a week or a month, timid people might be so frightened that they would hesitate to walk across a room.
>
> It is absurd and extremely mischievous to call a number of suicides a "wave" when vital statistics indicate that the number is less than ordinary.

With this comment, the *Editor and Publisher*, a leading periodical of journalistic interests, disposes of the furor that has agitated the periodical press of the country during the last six months. An investigation of suicide rates caused statisticians of the Metropolitan Life Insurance Company to say, in a recently issued bulletin, that the general tendency of the suicide rate among young people has been distinctly downward during the last sixteen years. A prompt investigation made for 1926 indicates that they were below the average for that year. Newspaper publicity concentrated on any unusual method of suicide causes an increase

in the number of persons who adopt that method. Concentration of publicity on juvenile suicide may be the stimulus to suicide for some person in the mental borderland who is unable to find his way to rationality. The *Editor and Publisher* should be commended for urging newspaper editors to secure facts before leaping into sensationalism. If any good at all can come out of the unwarranted publicity that has been given to this question, it can only be in the increased attention that is being given to individual juvenile psychology as a result of awakened public interest.

Association News

ANNUAL CONGRESS ON MEDICAL EDUCATION, MEDICAL LICENSURE AND HOSPITALS

Held in Chicago, Feb. 14, 15 and 16, 1927

(Continued from page 1085)

FEDERATION OF STATE MEDICAL BOARDS

FEBRUARY 16—MORNING

The Basic Science Law of Wisconsin

DR. EDWARD EVANS, LaCrosse, Wis.: The basic science law of Wisconsin forms an integral part of the codified medical laws of Wisconsin (1925) entitled "Treating the Sick." Seventeen days after the Wisconsin act became a law, Connecticut passed a similar law; but the genesis of the two was entirely different. The Connecticut law was the result of the typical American reaction—laxity, scandal, outraged public opinion, stringent yet fortunately effective law. In Wisconsin, the basic science act was the outgrowth of serious study by the house of delegates and council of the state medical society and of education brought about by the Wisconsin Antituberculosis Association, the extension department of the university, through a grant of $5,000 yearly for postgraduate medical education, brought to the practitioners by lecturers, clinical demonstrations, and other agencies.

The concrete idea of the basic science act was first advanced by Dr. Bock of Sheboygan in 1920. He felt keenly that for public health protection the school of treatment was less important than the ability to recognize communicable diseases without which such measures as quarantine and other public health activities must fail. In 1921 he proposed in substance our present act, and had it introduced into the legislature of that year. This was passed by both houses of the legislature, but through some clever lobbying was recalled by the assembly and killed. In 1923, the basic science bill was again introduced. In the meantime the chiropractic mill at Davenport was busy and our state was flooded with its product, and they demanded a separate board. Fortunately, this was not obtained; but with the confessed expenditure of over $7,500 they defeated the basic science bill.

For years the council of our state society questioned the propriety of the medical profession trying to lobby measures through the legislature, even public health measures. We definitely adopted the policy that the responsibility for public health measures rested with the legislature. We said that the organized profession is not responsible for either the enactment or enforcement of medical legislation. It was our duty to provide accurate information from the standpoint of medical science to those officially charged with the duty of law enactment and law enforcement, that they might have the best available information to guide them. The adoption and pursuit of this policy we regard as more important than the basic science act; in fact, the basic science act is a by-product of this policy.

How was this policy put in effect? After our defeat in 1923, our secretary sent a personal letter to each member of the legislature, to each state official and to nonofficial laymen. Our policy was frankly outlined to them. We laid our cards on the table, and this letter was accompanied by a year's subscription to *Hygeia*. In the spring of 1924 the first lay issue of the *Wisconsin Medical Journal* was sent out. This dealt with Wisconsin health problems, and the subject of basic science licensure requirements was discussed. Ten thousand copies were issued and sent to state, county, city, town and village officials; to libraries and a list of 3,000 others submitted to the secretary by the medical practitioners of the state. In 1924, our secretary visited every county society and explained our aims and aroused individual interest, and often for the first time an individual member or a whole county society learned what was being done for them, if not through them. New interest was aroused and many county societies lived for the first time. Then, too, the local member was made the effective means of enlightening and confirming in the faith the local legislator, and it is surprising what the family physician can do to confirm, if not to enlighten, the lawmaker.

Thus did the basic science bill of 1925 become the basic science law of 1925, with only four dissenting votes. That the basic science law may be regarded as merely a by-product of the policy outlined is evident from the fact that the distribution of *Hygeia* now includes libraries, normal schools, judges, district attorneys and others to almost 300 subscriptions. The lay issue (10,000 copies each year) was again published in 1925 and in 1926, and will soon appear for 1927.

For the past two years we have been reaching a much wider public through the weekly and daily press. The medical profession often thinks the press unjust and unfair. The press often ridicules us and our ethics. Both attitudes are probably due to misunderstanding and lack of cooperation. Our secretary (a journalist himself) is using the press and they like it, and now the weekly story is published by over 275 daily and weekly papers.

In 1915 the chiropractors secured legislation by which they could practice unmolested so long as they did not hold themselves out as licensed or registered. Our state became a mekka for them. It is estimated that 200 were coming into Wisconsin each year; 694 claimed exemption when the basic science act was published; 591 chiropractors had their licenses renewed last year. It is probable that their great numbers checked their making strenuous opposition to the basic science law.

The act is self sustaining; it does not work hardship; prosecution is easy under it. It is an effective, nonmedical sieve to filter out undesirables. It disarms the "medical trust" ballyhoo. It is not likely to be attacked or altered, and so, stabilizes and secures what has been accomplished. (This paper will be published in full in the *Federation Bulletin.*)

Report on First Year's Work of Commission on Medical Education

DR. WILLARD C. RAPPLEYE, New Haven, Conn.: What I have to say will be very brief because the report is being sent about to every one interested in medical education. The commission was organized to represent those in general education, those in the teaching and practice of the basic sciences, those in clinical medicine, and those in medical licensure who have gotten together and discussed what might be called more or less of a common denominator of experience among the group. Out of it has come the idea that the preparation for the practice of medicine and the function of the state licensing boards have in mind essentially the same objective; namely the ability, qualifications and training of an individual to practice medicine. We have started out to find out if we could what medical practice really is, and to do that we have sampled the practices in 500 different communities in twenty-six states and provinces. We found that 90 per cent of the visits were in the office and in the home, and that 75 per cent of office visits were for four groups of diseases, and 90 per cent of the home visits were for four groups of diseases. We then compared this material with the experiences in Great Britain under the national health insurance act, with the causes of absenteeism in industry, in school children and various other items of information of that kind, in order to get as clearly as we could the actual demands for medical service.

We analyzed the clinic visits in the period of one year in fourteen large cities and 256 clinics in the state of New York. We also made a study of the needs as distinguished from the demands, by making an analysis of such material as the experiences of McGrath, the defects found on physical examination by the Life Extension Institute, life insurance companies, school children and various other sources of that kind. That material all having been published elsewhere, we merely assembled it. A point that is distinctly important from the standpoint of both licensure and medical education is the definite trend toward specialization — early specialization. Approximately 40 per cent of the current graduates in medicine are going directly into the specialties. In some schools it runs anywhere from 75 to 90 per cent, one school reporting that 100 per cent of the men go directly into the specialties. About 50 per cent of those going into the specialties are going in without any clinical experience in the way of general practice. About 54 per cent of recent graduates are going directly into the specialties without a period of general practice, which many have thought ought to be required before specialization.

We have studied the question of the supply of physicians and the probable future numbers. There are a good many figures, but it is quite evident on the basis of our present production of medical students, and the age at which they begin practice, that we shall have by 1965 approximately 130,000 practicing physicians as compared to 129,000 now; that is, 129,000 under 65 years of age. The low water mark in the number of physicians will be reached in 1945 on the basis of these actuarial studies of the life tables and survivals of individuals according to various life insurance tables. The ratio of physicians to population will be the highest in 1955, owing to population changes and the gradual increase in the number of physicians. At present there is one physician under 65 years of age to 891 population. In 1955, the ratio will be one to about 1,300. Then we have set up the figures giving the numbers of physicians and the ratio to population on the basis of students beginning practice at 27 and 26 as distinguished from the present policy of going in at 28; also on the basis of increase in the productive capacity of medical schools by 10 and by 20 per cent.

I think that what is emphasized more than anything else in the study so far is the trend toward shortening elementary education. A number of states are beginning to work it out. The idea of the basic course as conceived by all medical educators is to prepare a student to begin the practice of medicine. This is a function that the licensing boards are concerned with. Each state, of course, has its own requirements, and there has been a great deal of confusion about it. I feel that there is a great deal of misunderstanding about the country regarding these requirements. Evidently, there is more essential uniformity than is ordinarily assumed by one who has not looked into it. A certain number of states are setting up rigid requirements and specifying hours. I am told by men actually in the work that they have relatively little difficulty getting by those for the graduates of the better schools. Ninety-five per cent of the men graduating from class A schools pass the licensing board examination.

We have felt that in the basic course of medicine our whole emphasis, from the standpoint of the medical school, should be a preparation of the individual so he may be competent to begin the practice of medicine. I want particularly to emphasize that, because that is the function the boards have. The ideas of medical education are changing very rapidly. A number of schools are now conducting medical education on the basis of three years of prescribed work. It may be distributed over four or five years, but the actual required work is approximately three years, the elective periods in some instances being required, and in others not required. At any rate, so far as the prescribed course is concerned it is in many instances already cut 25 per cent; in some schools about 35 per cent. There are a number of these experiments going on that are going to have a certain implication in licensure, and it is quite obvious that a good many of them cannot be carried on to their fullest fruition without the cooperation of the state boards.

It is the feeling of our commission that all individuals who are desiring to practice any form of the healing art ought to have the same reasonable knowledge and skill, and it is this basic conception of medicine and this basic conception of what the community needs in the way of medical service that is really the basis of the formulation of any program of the commission itself. Ability to make a diagnosis ought to apply to those with the limited licensure as well as to those with unlimited licensure. In this question of specialization, suggestion has been made, and in some states it is being seriously discussed, of establishing a double system of licensure. Probably the difficulties are insurmountable in working out the details. At any rate, there is a definite feeling that a man who goes into the specialty, elective major surgery, head specialties and other fields of that character ought to be qualified on a somewhat different basis than the man who is prepared for general work, and who is going into general medical practice.

(To be continued)

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ARIZONA

Dr. Wylie Honored. — In commemoration of the fiftieth anniversary of his entering the practice of medicine, members of the medical and legal professions of Maricopa County gave a dinner in honor of Dr. Winfred Wylie, at Phoenix, March 15, which was sponsored by the secretary of the state medical association, Dr. Delamere F. Harbridge, and was attended by about 150 physicians and attorneys and their wives from various parts of the state. Dr. Joseph M. Greer, president, Maricopa County Medical Society, introduced the secretary of the state medical association, who presided. Among the speakers were Hon. F. C. Struckmeyer, Hon. Samuel White, and Drs. E. Payne Palmer, George M. Brockway and John E. Bacon. An engraved watch was presented to the guest of honor as a token of respect.

State Medical Meeting.—The thirty-sixth annual meeting of the Arizona State Medical Association will be held at Yuma, April 21-23, with the Yuma County Medical Society acting as hosts. All papers will be limited to twenty minutes, and physicians desiring to open a discussion on a paper should communicate with Dr. Charles S. Vivian, Goodrich Building, Phoenix, at once. Among the speakers will be Dr. A. Bennett Cooke, Los Angeles, whose subject will be "Use and Abuse of Iodine in the Treatment of Goiter"; Dr. James Ross Moore, Los Angeles, "Consideration of Certain More or Less Intangible Thyroid Manifestations"; Dr. Stuart Pritchard, Battle Creek, Mich., "Thoracic Pain"; Dr. Elliott G. Colby, San Diego, "Brittle Bones and Blue Sclera"; Dr. Sterling N. Pierce, Los Angeles, "Low or Cervical Transperitoneal Cesarean Section"; Dr. Maynard C. Harding, San Diego, "Bunions; Different Types, Different Treatment," and Dr. Clarence E. Rees, San Diego, "Cautery in Treatment of Cancer." In addition, a number of prominent physicians in the state of Arizona will give addresses. Thursday evening, the Yuma County Medical Society has arranged a special program of entertainment. The council and the house of delegates meet Thursday morning.

CALIFORNIA

Bill Introduced.—House bill 1214 regulates the issuing of certificates to practice orthodontia and midwifery.

CONNECTICUT

Personal.—Dr. Carl J. Kilburn has been appointed health officer of Burlington; Dr. William S. Randall, health officer of Shelton, and Dr. Mary G. Haskins, health officer of Bridgewater.——Drs. Martha M. Eliot and Edith B. Jackson recently went to Porto Rico, under the auspices of the U. S. Children's Bureau, to carry out the study of bone development in children in a tropical climate; in the party were also three technicians. They are cooperating with the

department of health in examining babies and making roentgen-ray photographs of limbs; while there, Dr. Eliot will lecture in the new school of tropical medicine.

Chemists Award Medal to Professor Mendel.—The gold medal of the American Institute of Chemists for 1927 was awarded to Prof. Lafayette Mendel, Sterling professor of physiologic chemistry at Yale University, March 28, at a meeting of the institute in New Haven. Professor Mendel has been a teacher at Yale since 1892, and for thirteen years has been a member of the National Academy of Sciences. He is the editor of the *Journal of Biological Chemistry*, an assistant editor of *Chemical Reviews*, and a member of the Council on Pharmacy and Chemistry of the American Medical Association. He has been among the foremost in biochemical research for many years. His most notable work is, perhaps, that done in collaboration with Thomas B. Osborne on nutrition and growth.

DISTRICT OF COLUMBIA

Annual Medical Banquet.—The Washington Medical and Surgical Society will hold its annual banquet, April 7, Mayflower Hotel, and, in accordance with custom, will confer honorary membership on outstanding members of the profession, among whom will be Dr. Ross H. Skillern, Philadelphia, and Dr. Coursen B. Conklin, secretary of the Medical Society of the District of Columbia. Dr. Skillern will read a paper on "Headache and Sinus Disease." The president of the Washington Medical and Surgical Society, Dr. Augustus C. Gray, will preside.

FLORIDA

Society News.—Dr. Fred H. Albee addressed the January meeting of the Dade County Medical Society, Coral Gables Country Club, on "Ununited Fractures of the Hip."——Dr. Edward Starr Judd, Rochester, Minn., addressed the Duval County Medical Society, Jacksonville, March 2, on "Surgery of the Biliary Passages"; Dr. Louie M. Limbaugh has been elected president of the society for 1927.——Physicians from Columbia, Hamilton, Madison and Suwannee counties held a social and scientific meeting at White Springs, February 11. The address of welcome was delivered by Senator McCall. Dr. Herbert Caldwell, U. S. Veterans' Hospital, Lake City, read a paper on "The Heart and Its Irregularities"; there was a dinner and several musical numbers.

ILLINOIS

Bill Introduced.—Senate bill 195 would define and regulate the practice of osteopathy.

Personal.—Dr. Christian H. Diehl, Effingham, took up his duties as superintendent of the Lincoln State School and colony, April 1.——Dr. Clinton L. Montgomery, Blue Mound, has been appointed to the staff of the state hospital at Alton.

House Kills School Nurses Bill.—The Swift bill to authorize the employment of school nurses was killed, March 30, by the house, following a number of speeches unfavorable to paternalistic legislation. The senate approved the bill. According to the Chicago *Tribune*, many school nurses may be thrown out of employment, or else continued in office by unofficial consent only, as a result of the action of the house.

Liquor Licenses Revoked.—The district prohibition administrator with headquarters in Chicago recently revoked the liquor licenses of the following for the reasons indicated:

Dr. Harry C. Kariher, Champaign, inaccurate records; diversion; illegal issuance of prescriptions.

Dr. Austin N. Lakin, Illiana, P. O. State Line, Indiana, inaccurate records; illegal issuance of prescriptions.

Dr. Milton S. Marcy, Peoria, inaccurate records; illegal issuance of prescriptions.

Chicago

Lectures on Tuberculosis.—Dr. Allen K. Krause, editor, *American Review of Tuberculosis*, will deliver a series of lectures, April 11-13, under the auspices of the Chicago Tuberculosis Institute, as follows: April 11, 1 p. m., Northwestern University, 303 East Chicago Avenue; 3 p. m., by radio, station WGN; 8:15 p. m., Mercy Hospital; April 12, 3 p. m., Grant Hospital; 8 p. m., Harper Memorial Library, University of Chicago; April 13, 3 p. m., Presbyterian Hospital; 8:30 p. m., Marshall Field Annex, sixth floor, where he will address a joint meeting of the Chicago Medical Society, the Institute of Medicine and the Chicago Tuberculosis Society.

Chicago Medical Society Summer Clinics.—The schedule of the summer clinics of the Chicago Medical Society for 1927 will soon be announced. Many hospitals and several large laboratories will cooperate in this work. Last year registration was limited to physicians living in Illinois; the increased facilities for the coming summer make it possible to open registration to physicians in other states. Admission will be by card only, issued by the Chicago Medical Society, and the fee will be $10 for each two weeks' course, payable at the time of registration. A physician may register for only one course of two weeks. The first course will begin June 13, 9 a. m., and the second, June 27. Physicians in Chicago and Illinois should register early, as registration will be in order of receipt of applications. Registration closed last year one week after the first announcement.

Society News.—At a joint meeting of the Institute of Medicine and the Chicago Gynecological Society, April 11, at the City Club, Dr. Herbert M. Evans, University of California Medical School, will address the societies on "The Relation Between Nutrition and Fertility"; Edward A. Doisy, Ph.D., St. Louis University School of Medicine, on "Extraction of an Ovarian Hormone and Some of Its Chemical and Pharmacologic Properties," and Edgar Allen, Ph.D., University of Missouri School of Medicine, on "Animal Reactions of Ovarian and Placental Hormones."——The Chicago Pediatric Society and the Cook County Hospital staff will hold a joint meeting, April 19, 8 p. m., at the hospital.——At the meeting of the Chicago Roentgen Society, Virginia Hotel, April 14, Drs. Harry M. Jones and Benjamin H. Orndoff will speak on "The Possibility of Hypothyroidism, Following Roentgen-Ray Therapy of Toxic Thyroids" and "Carcinoma of the Breast, and the Prevention of Recurrence," respectively.——At the April 6 meeting of the Chicago Medical Society, Dr. Philip J. Trentzsch, director of mental hygiene, Culver Military Academy, Culver, Ind., gave an address on "Preventive Medicine in Nervous and Mental Diseases," and Dr. Louis W. Sauer on "Fundamentals in the Feeding of Underweight Children."——The four hundred and twenty-sixth regular meeting of the Chicago Gynecological Society will be April 15 at 50 East Erie Street; Dr. William C. Danforth will read a paper on "Immediate Repair of Cervical Tears After Labor," and Dr. Carey Culbertson and J. L. O'Leary on "The Form Changes of the Human Uterine Gland"; members desiring to have dinner together at the Allerton Club should notify the secretary of the society, Dr. Joseph L. Baer.

IOWA

Society News.—The Iowa Clinical Medical Society met at Council Bluffs, March 28; cases were presented by the Drs. Treynor and Drs. Johnson and Ash of Council Bluffs, and by Dr. John C. Parson of Creston. Dr. Edward T. Edgerly, Ottumwa, was elected president at this meeting, and Dr. Russell C. Doolittle, Des Moines, secretary.

Bills Introduced.—Senate bill 369 would regulate the sale and distribution of sodium fluoride. Senate bill 349 defines the word physician so as to include osteopathic physicians. Senate bill 414 provides for the appointment and compensation of physicians and other attendants necessary to provide proper treatment for persons suffering from venereal diseases who are isolated in detention hospitals. House bill 489 would provide for the commitment of insane war veterans to the U. S. Veterans' Hospital. House bill 483 would regulate the sterilization of certain persons, and would establish a state board of eugenics.

LOUISIANA

New Pre-Medical Course with More Science.—Tulane University has installed a new academic-medical course, effective next fall, which will prescribe three years of scientific work in the College of Arts and one in the medical school for a degree of bachelor of science. The new course is much the same as the one now in force, except that at present two years of work in the premedical sciences and two years in the medical school is required. Instead of calculus, as required now, a year of physics will be required, and three years of chemistry and two of biology.

Hospital News.—The Charity Hospital, New Orleans, has awarded the contract for the construction of a new intern's home, to cost about $123,000.——A new home for orphan babies was opened, March 26, at Eighth and Chestnut streets, New Orleans. It will be supported by contributions from the Protestant churches of the city and will accommodate fifty babies under 3 years of age. The building is to contain a hospital room, a kitchen, sleeping rooms, nurses' quarters, a playroom, and sewing room and parlors; there will be a large lawn. This makes the third institution main-

tained for infants in New Orleans; the other two are the St. Vincent Asylum, which cares for nearly 300 babies, and the King's Daughters' Nursery.

State Medical Meeting.—The Louisiana State Medical Association will hold its next annual meeting at New Orleans, April 26-28, under the presidency of Dr. Stephen M. Blackshear. Arthur J. O'Keefe, mayor of the city, will deliver the address of welcome. The Baptist Hospital will tender a luncheon the first day. The president's reception, Tuesday evening, at the Elks' Club, will be followed by dancing, and the annual dinner, Wednesday evening, will be informal. Tulane University of Louisiana School of Medicine will tender a luncheon, Thursday, on which day there will be a golf tournament. Automobiles will be furnished by the committee on arrangements to convey guests to the various luncheons. Diagnostic and scientific clinics have been arranged at all the hospitals. There will be a preconvention program, April 25, at the Hutchinson Memorial Building, participated in by the medical school, a number of hospitals and local medical societies. The papers on the program of the scientific sessions are all by physicians of the state of Louisiana except those to be read before the section on general surgery by Dr. Waltman Walters, Rochester, Minn., on "Management of Cases of Obstructive Jaundice," and by Dr. Willis C. Campbell, Memphis, Tenn., on "Ununited Fractures," and a paper to be given before the section on public health and sanitation by Dr. Felix J. Underwood, state health officer of Mississippi, on "The Proper Relation Between the Health Officer and the Physician." Cups will be awarded the winners in the golf tournament. The scientific exhibit will be in the Hutchinson Memorial Building.

MAINE

Bill Introduced.—Senate bill 276 would appoint a committee to study and report on workmen's compensation conditions.

Series of Public Health Conferences.—Representatives of various organizations, including the executive committee and the staff of the Maine Public Health Association, the state department of health, the council and committee chairmen of the Maine Medical Association, the secretaries of county medical societies and the state medical association's committee on outside relations, held conferences at Portland, February 10. The proceedings of these meetings are reported in the March *Journal of the Maine Medical Association.* They include reports of the public health association for 1926, and an outline of the policy of cooperation with the Maine Medical Association. The executive committee of the public health association referred to the Maine Medical Association's committee on public relations the question of the approval of a set of standing orders for the guidance of county medical societies in preparing standing orders for the guidance of public health association nurses in their county. It also referred the questions of compiling a list of books and leaflets on health to be suggested by its nurses for home reading; of considering the establishment of a heart section, and of selecting physicians to hold occasional clinics when the policy has not been decided by the state medical association. The committee of the Maine Medical Association took up these questions and adopted standing orders for school nurses; it voted, further, that in those communities in which clinics are held for crippled children, tuberculosis and so forth, the choice of physicians to conduct them should remain with the county medical society. The meeting of the council of the state medical association was presided over by the president, Dr. Lester P. Gerrish.

MARYLAND

Bills Introduced.—Senate bill 439 provides for the gathering of statistics of diseases and of their treatment. House bill 671 would provide for the regulating and licensing of hairdressers and cosmetologists. House bill 438 would require packages containing lye and similar substances which are sold for household use to be labeled "poison."

University News.—The campaign for funds conducted by the half-century committee of Johns Hopkins University, Baltimore, closed Dec. 31, 1926, with total contributions of more than $7,000,000 from 3,992 subscriptions.——Dr. Paul G. Shipley, Johns Hopkins University, has accepted the invitation of the Biochemical Society of Jefferson Medical College to address the fourth annual open meeting in October.

Personal.—The faculty of medicine and academic senate of the John Casimir University of Lwow, Poland, recently conferred the degree of doctor of medicine, honoris causa, on Dr. John J. Abel, professor of pharmacology, Johns Hopkins University Medical Department.——Dr. John M. T. Finney, Baltimore, has returned from London, where he delivered the annual Hunterian lecture.——Dr. William H. Welch, Baltimore, has been elected honorary president of the American Social Hygiene Association, to succeed the late Charles W. Eliot.

MASSACHUSETTS

Bills Introduced.—Senate bill 282 would establish a board of examination and registration to regulate the practice of chiropractic. Senate bill 287 is a redraft of the house lye bill 1104.

Cost of Medical Education at Harvard.—The annual report of the treasurer of Harvard University, Boston, shows, according to *Science*, that for 1925-1926 there was expended for the medical school, $675,943.89; for the medical school on courses for graduates, $44,213.02; for the school of public health, $189,959.69, and for the heat and power plant of the medical school, $209,343.03.

Cold Weather Typhoid.—An outbreak of ten cases of typhoid occurred in Wakefield following a church supper, held January 21, which, the *Boston Medical and Surgical Journal* states, is believed due to typhoid carriers who assisted in preparing the meal. It is further stated that the Wakefield epidemic is the second cold weather outbreak this winter presumably due to carriers.

Society News.—Dr. David L. Edsall, dean, Medical School of Harvard University, addressed the Boston Health League, March 14, at the annual dinner, on his recent six months' experiences in China.——Dr. Edward R. Baldwin, Saranac Lake, N. Y., will address the Trudeau Society, Boston, April 12, on "Tuberculous Infection, with Especial Consideration of Its Quantity, Virulence and Frequency."——The Edward K. Dunham Lecture for 1926-1927 was given by Dr. Richard Willstätter of the University of Münich, March 29, at the Medical School of Harvard University, on "Progress in Enzyme Research."

MICHIGAN

Bills Introduced.—Senate bill 285 and house bill 240 would provide for the free hospitalization of indigent persons. House bill 340 would provide for the examination, regulation, licensing and registration of optometrists. House bill 408 would provide that packages containing carbon tetrachloride be provided with poison labels. House bill 129 would make appropriations for the board of osteopathic registration.

MINNESOTA

Bills Introduced.—House bill 764 would regulate the sale of drugs, medicines and poisons. House bill 1110 would create a state board of naturopathic examiners, and would define and regulate the practice of naturopathy. Senate bill 787 would define and regulate the practice of chiropractic, and would create a state board of chiropractic examiners. House bill 1208 would regulate the appointment of experts in civil trials and proceedings.

Society News.—Dr. Walter C. Alvarez, Mayo Clinic, Rochester, addressed the Six o'Clock Club, Minneapolis, March 3, on "Medical Folklore"; the club is composed of students and faculty members of the Medical School of the University of Minnesota.——Dr. Allen K. Krause, Baltimore, will address the St. Louis Medical Society in Duluth, April 9, on "Tuberculosis." Dr. Krause, on April 4, spoke at the University of Minnesota, and on the following days addressed the lay audiences in St. Paul, Rochester and Duluth.

Personal.—Dr. Benjamin F. Smith, assistant superintendent, St. Peter State Hospital, has been appointed superintendent of the Willmar State Asylum, to succeed Dr. George T. Baskett, resigned.——Dr. William J. Mayo, Rochester, delivered the D. C. Balfour lecture in surgery at the University of Toronto, April 5, on "The Relation of the Basic Medical Sciences to Surgery."——Dr. Frederick C. Drenning, Duluth, has been elected a medical director of the Modern Samaritans to succeed the late Dr. William H. Salter, who was for thirty years medical director.——Dr. Walter J. Marcley has resigned from the staff of the General Hospital, Minneapolis, in order to devote his full time to the U. S. Veterans' Hospital, where he has been in charge of tuberculosis work.——Dr. Hermanus DeBoer has been elected mayor of the village of Edgerton for the fifth consecutive time, and Dr. Bottolf T. Bottolfson was recently elected mayor of the city of Moorhead.

MISSOURI

Society News.—The next clinic of the Kansas City Clinical Society will be April 12, in cooperation with the Jackson County and Wyandotte medical societies at St. Margaret's Hospital, Eighth, Vermont and Harrison streets, Kansas City, Kan.; the program includes a surgical operative clinic, ward rounds in the medical clinic, papers and various demonstrations. —— The Missouri-Kansas Neuropsychiatric Society was addressed, February 16, at Kansas City, by Dr. Ned R. Smith, Halstead, Kan., on "Anxiety as an Etiologic Factor in Organic Disease" and Dr. Franklin G. Ebaugh, Denver, Colo., on "Treatment of Paresis by Malaria."

Clinic for Food Handlers Proposed.—The Jackson County Medical Society has endorsed the plan of the city health officer whereby food handlers would be required to obtain certificates of health. It is planned to establish a municipal clinic for the periodic examination of persons engaged in handling food, where they would be required to register annually for a fee of $1 and submit to physical examination about every three months free of charge. The personnel of the clinic proposed would be one full-time physician, one part-time physician, two nurses, a bacteriologist and clerical help, and the estimated cost of establishing it would be about $20,000. Under the plan proposed, private family physicians would be permitted to issue certificates to food handlers provided they first have the approval of the health department. The plan has been submitted to the city council in an ordinance, and a delegation from the Jackson County Medical Society was expected to appear before the council to support it.

NEVADA

Personal.—Dr. George L. Servoss, Reno, has been appointed health officer for Washoe County.——Dr. Edward E. Hamer, Carson City, has been appointed secretary of the state board of health to succeed the late Dr. Simeon L. Lee.

NEW HAMPSHIRE

Bill Introduced.—House bill 247 would regulate the vaccination of school children.

Society News.—At the annual meeting of the Merrimack County and Centre District Medical Society, Dr. Ervin T. Drake, Franklin, was elected president; Dr. David W. Parker, Manchester, president of the state medical society, was guest of honor at this meeting; Dr. James H. Townsend, Concord, gave an address on "Immunity and Treatment in Contagious Diseases."

NEW JERSEY

Bill Introduced.—Senate bill 278 would prevent summary arrests under the medical practice act.

Unlicensed Practitioners.—The state board of medical examiners of New Jersey reports that the following illegal practitioners were tried recently:

John J. Kashkevich, M.D., Newark, pleaded guilty to practicing medicine without a license and paid the penalty.
W. Campbell Bewley, Riverside, unlicensed chiropractor, found guilty of practicing medicine without a license and paid the penalty.
William S. Winters, Palmyra, pleaded guilty to practicing medicine without a license and paid the penalty.
Jennie Levin, Burlington, pleaded guilty to practicing medicine without a license.
Walter H. Stransbury, Freehold, pleaded guilty to practicing medicine without a license.
Schuyler C. Pew, Perth Amboy, pleaded guilty to practicing medicine without a license.
Jacob D. Joseph, Elizabeth, pleaded guilty to practicing medicine without a license.
Moses Goldman, Newark, druggist, pleaded guilty to practicing medicine without a license.
Edward K. Biggard, Pleasantville, unlicensed chiropractor, pleaded guilty to practicing medicine without a license.
Anthony Zally, Jersey City, druggist, pleaded guilty to practicing medicine without a license.
Jacob Ginsburg, Union City, masseur, pleaded guilty to practicing medicine without a license.
Edward Barden, Jersey City, unlicensed chiropractor, pleaded guilty to practicing medicine without a license.
John Lini, Trenton, proprietor of a beauty parlor, paid the penalty for practicing medicine without a license.
Harrison Schoetzau, Hoboken, druggist, paid the penalty for practicing medicine without a license.
George Norr, Hoboken, druggist, paid the penalty for practicing medicine without a license.
Kathryn Marsland, Atlantic City, masseur, pleaded guilty to practicing medicine without a license.
Frona Bowen, Riverside, pleaded guilty to practicing medicine without a license.
Lawrence R. Palese, found guilty of practicing medicine without a license, refused to pay the penalty and was committed to jail for twenty days.
Fred A. Kern, Hawthorne, unlicensed chiropractor, paid the penalty of practicing medicine without a license.
William Bailey, East Orange, pleaded guilty to practicing medicine without a license and paid the penalty.
David Shaw, Paterson, unlicensed chiropractor, found guilty of practicing medicine without a license.
Arthur A. Legg, Paterson, unlicensed chiropractor, pleaded guilty to practicing medicine without a license.
Louis Adler, Newark, found guilty of practicing medicine without a license.
Charles D. Baudendistel, West New York, licensed chiropractor and osteopath, found guilty of practicing medicine without a license.
Alson J. Walker, Orange, unlicensed chiropractor, found guilty of practicing medicine without a license, refused to pay the penalty and was committed to jail for 200 days.
Morris Klar, Jersey City, druggist, found guilty of practicing medicine without a license.
Jennie B. Nunn, Camden, found guilty of practicing medicine without a license, refused to pay the penalty and was sentenced to jail for ten days.
Arthur Boerner, Paterson, pleaded guilty to practicing medicine without a license and paid the penalty.
James Benton, herbalist, found guilty of practicing medicine without a license.
Hgalmir Johansen, Newark, masseur, tried for practicing medicine without a license (died before decision was rendered).

NEW YORK

New Albany Medical College Building.—The new building of the Albany Medical College is practically completed. It is essentially a six story building, about 49 by 125 feet, of modified colonial type, and is connected with the Albany Hospital on the first floor and in the basement. The work of the department of anatomy is being given in the new building now, and other departments will move in as the respective rooms are finished. The first floor is to be occupied by the executive offices, faculty room, library, museum and classrooms. The second floor will be devoted almost exclusively to physiology, including an office and private laboratory for the professor and assistants, a large class room for students of general physiology, and a special room for mammalian work. The third floor will house the department of chemistry, including the office and private laboratory of the professor and assistants, a larger laboratory for biochemistry which will also be used for certain phases of clinical pathology, and another large laboratory room adjacent to the chemical laboratory. The fourth floor will be for anatomy, histology and embryology, and will include the private office and laboratory of the professor and assistants, a small amphitheater for anatomic demonstrations, and a large classroom which will be used for histology and embryology, and special investigation. The fifth floor, containing small dormer windows on the south side and a large dormer window running almost the entire extent of the north side, provides space for animals, including detention, sterilizing and operating rooms, housing quarters, and a large room for gross anatomy which is unusually well lighted. The new hospital unit will not be completed until the close of the present school year. It is an eight story addition to the teaching hospital and will add about 210 beds, making the total capacity of the Albany Hospital about 600 beds.

New York City

Personal.—Dr. William H. Guilfoy completed forty-two years as registrar of records in the New York City Department of Health, March 17.——Dr. Karl Landsteiner, member of the Rockefeller Institute for Medical Research, has been elected a member of the German Academy of Natural Sciences in Halle, and a corresponding member of the Society for Microbiology in Vienna.

Hospital News.—Prince William of Sweden gave a lecture at the Brooklyn Academy of Music, March 21, a part of the proceeds of which went to the Swedish Hospital.——The Long Beach Hospital, erected at a cost of $215,000, will be formally dedicated, April 30. Drs. John P. Grant, George S. Reiss, Martin Kutscher, Milton Reder and John McCabe will become chiefs of staffs of the departments.——Victory Memorial Hospital, Seventh Avenue and Ninety-Second Street, opened, March 20; Dr. Charles Fisher is to be chief of staff.

Patent Medicine Maker Leaves Huge Fortune.—Elden C. DeWitt, manufacturer of patent medicines, died, March 29, at his home in Scarsdale, leaving a fortune estimated in the New York *Herald-Tribune* at $85,000,000. DeWitt was

owner of the E. C. DeWitt Company of New York, and held large interests in a Canadian soft drink company. He began manufacturing patent medicine in Sioux City, Iowa, about fifty years ago. In his will, DeWitt bequeathed a life interest in the estate to his wife, and on her death, $200,000 to Minola C. Bryant of Chicago; $100,000 to William D. Louchs, his lawyer, and the residual estate to fourteen relatives. If there were any bequests to hospitals or any other charity, they were not mentioned by the *Herald-Tribune*.

Society News.—The New York Academy of Medicine conducted a symposium on measles, March 17, in cooperation with the section on pediatrics; the speakers were Drs. Edward S. Godfrey, Jr., Albany, William H. Park and Henry J. Spencer. —— Roger Adams, Ph.D., professor of chemistry, University of Illinois, addressed the scientific staff of the Rockefeller Institute for Medical Research, March 11, on "Chaulmoogra Oil."——Dr. Thomas C. Chalmers was inducted into office as president of the Medical Association of the Greater City of New York at the February meeting. Among others, Dr. Edward H. Cary, Dallas, Texas, a trustee of the American Medical Association, was present at this meeting. ——The East New York Medical Society held its seventeenth annual dinner at the Hotel Astor, March 13. —— Victor Henri, professor of physical chemistry, University of Zurich, addressed the scientific staff of the Rockefeller Institute for Medical Research, March 18, on "Quantitative Researches on Biologic Actions of Ultraviolet Rays."——Prof. A. V. Hill of the University College, London, addressed the scientific staff of the Rockefeller Institute for Medical Research, March 25, on "The Viscous-Elastic Properties of Muscles and Their Molecular Basis." —— Major James F. Coupal, U. S. Army, addressed the Kings County Medical Society, April 1, on "Preventable Diseases of Modern Life." —— Dr. Matthias Nicoll, Jr., state health commissioner, addressed the Medical Society of the County of New York, March 28, on "Toxin-Antitoxin for the Prevention of Diphtheria," and Dr. Louis I. Harris, city commissioner of health, on "Elimination of Diphtheria in the City of New York." Other speakers included Drs. William H. Park and Walter L. Carr; J. H. Schriever, ScD., presented a moving picture on the manufacture of diphtheria antitoxin.

NORTH DAKOTA

Personal.—Dr. Lester J. Evans, who has been associated with the Fargo Child Health Demonstration for four years, has returned to New York to continue demonstration work.

Society News.—Dr. Sverre Oftedal, Fargo, addressed the Cass County Medical Society, recently, on "Kidney Infections."——Dr. John E. Hetherington has been elected president of the Grand Forks Medical Society.——Dr. Henry A. Owenson, Grace City, has been elected president of the Tri-County Medical Society of North Dakota.——The state medical association will meet, June 1-2.

OHIO

Bill Introduced.—House bill 485 would abolish the office of coroner, imposing the duties of coroner on the prosecuting attorney, and would provide for the appointment of an assistant as medical examiner.

Cleveland Society News. — The Academy of Medicine of Cleveland has organized a speakers' bureau to supply the public with talks on health education, given under the auspices of the academy. Each speaker, who is a member of the academy, is required to file with the committee on health education a brief of his address. The board of directors of the academy has approved the granting of associate nonvoting memberships to three physiotherapists employed in Cleveland hospitals, contingent on their not engaging in the limited practice of medicine and on their having membership in their own local physiotherapy society. The board recently ruled limiting associate membership for dentists to those who are members of the Cleveland Dental Society. More than 90 per cent of the interns in Cleveland hospitals are nonvoting members of the academy; of the interns who have recently entered private practice in Cleveland, almost 100 per cent have become members of the academy.

OKLAHOMA

Muskogee Sells Its Hospital.—The *Journal of the Oklahoma State Medical Association* notes that Muskogee recently sold the city hospital to the veterans' bureau. The city now has funds to build but is "at sea" over the question of a location. A committee of the city council rejected an offer from the Baptists, selected a site, then rescinded its action.

Society News—Special Guest Day.—The Garfield County Medical Society will hold a special guest day program at Enid, April 16; clinics will be conducted in pediatrics, dermatology, orthopedics, internal medicine and surgery. The program includes addresses by Dr. Ernest Sachs, St. Louis, on "Diagnosis of Brain Tumors"; Dr. Andrew B. Small, Dallas, Texas, "Intestinal Obstruction"; Dr. Wayne A. Rupe, St. Louis, "Symptoms of Underfeeding in Breast Fed Infants"; Dr. Charles E. Ruth, Des Moines, Iowa, "Troublesome Fractures"; Dr. Dalton K. Rose, St. Louis, "Types of Urinary Incontinence"; Dr. Richard L. Sutton, Kansas City, "Diagnosis and Treatment of Cancer of the Skin," and Charles W. Keeling, D.D.S., "Residual Infection of the Jaw After Teeth Extraction." At the banquet, Dr. Sutton will give an illustrated lecture on "Tiger Trails of Southern Asia."

State Provides Treatment for Crippled Children.—The governor signed house bill 170, March 10, which provides for treatment for crippled children of indigent parents. Any judge may direct the county superintendent of health to examine and report on the condition of any child of indigent parents who is suffering from a deformity or malady which may probably be cured, and he may summon other physicians to obtain their opinion. When the reports are filed, the court may enter an order for the entrance of the child to the University Hospital, Oklahoma City, for free treatment. Orthopedic cases may be sent to other Oklahoma hospitals, provided they are willing to accept the compensation provided for in the act. Only orthopedic surgeons who devote at least 60 per cent of their time to that specialty, and who have been passed on by the faculty of the state university after submitting their qualifications, may qualify for this work. At least once a year, the faculty of the university and the state health department shall hold free general clinics in each congressional district to examine children who may be presented.

PENNSYLVANIA

Bills Introduced. — House bill 1791 would prohibit the spraying of chemicals and poisons injurious to animal life on grass and vegetation adjacent to highways. Senate bill 1092 defines the practice of chiropody.

Diagnostic Mobile Clinics.—The state department of health has again begun work with the diagnostic extension tuberculosis mobile clinics, under the field supervision of Dr. Charles C. Custer of Mont Alta Sanatorium. Letters have been written to local physicians to inform them that this work is for the benefit of communities in which state clinics do not exist, and that they are for diagnosis only, a copy of the clinical observations being referred to the local physicians. The work has started early this spring in Union County, so that a larger number of rural communities may be visited before winter comes than was visited last fall. The mobile clinics do not treat any cases.

Appointments to Geisinger Memorial Hospital.—Dr. Kenneth Fowler has taken up the duties of director of the department of pathology at the Geisinger Memorial Hospital in Danville, and Dr. Sydney J. Hawley has been appointed chief of the department of roentgenology at the hospital. Dr. Fowler resigned as director of the laboratories of the hospital of the University of Michigan to accept this position. For several years he was an instructor in pathology at the University of Chicago, and four years ago went to Ann Arbor to organize the clinical laboratories in the new university hospital. Dr. Hawley, for the last year, has been assistant to the chief of the department of roentgenology at the Jefferson Hospital, Philadelphia.

Society News.—The Allegheny County Medical Society will hold its annual election at the Hotel Schenley, April 12; the society will conduct a symposium, April 19, on rheumatic heart disease, and the speakers will be Drs. Howard G. Schleiter, Mortimer Cohen, James D. Heard and Lewis A. Conner.——Dr. John O. Polak, Brooklyn, gave the Stewart Memorial Lecture, March 27, at the Academy of Medicine, Pittsburgh, on "A Study of the Influence of Fibroids on Conception, Pregnancy, Labor and the Puerperium."——The Philadelphia County Medical Society conducted a symposium on nervous diseases that originate in the different periods of life, March 23, in which the speakers were Prof. Clarence E. McClung, and Drs. DeW. Ludlum, Weisenburg, Burr and McCarthy.——Dr. Lourain E. McCrea addressed the Philadelphia Urological Society, among others, March 28, on "A New Type of Urethroscope," with lantern slide demonstration.

Philadelphia

Personal.—Rear Admiral William C. Braisted, formerly surgeon general, U. S. Navy, has retired from the presidency of the Philadelphia College of Pharmacy, and will spend several years in travel; Admiral Braisted has been president of the college since 1921.——Dr. Myer Solis-Cohen, assistant professor of medicine, University of Pennsylvania Graduate School of Medicine, has been appointed chief of the pediatric service number 2 at Mount Sinai Hospital.

TENNESSEE

State Medical Meeting.—The ninety-fourth annual meeting of the Tennessee State Medical Association will be in Chattanooga, April 12-14.

Health at Memphis.—Telegraphic reports to the U. S. Department of Commerce from sixty-eight cities with a total population of about 30 million, for the week ending March 19, indicate that the highest mortality rate (25.6) was for Memphis, and that the rate for the group cities as a whole was 14.1. The mortality rate for Memphis for the corresponding week last year was 19.1, and for the group of cities, 18.2.

"United Medical Doctors" Leave Chattanooga.—Alvin Watson obtained a judgment, March 11, to recover $85 from the "United Medical Doctors" in Chattanooga, who had guaranteed to cure him, it is reported, for $100. Watson claimed that the "doctors" failed to restore his health; he obtained an attachment on the office furniture of the "United Medical Doctors," and it was ordered sold. The "doctors" left town after the suit was filed, and went to Knoxville to open another office.

VIRGINIA

University News.—Dr. Hugh S. Cumming, surgeon general, U. S. Public Health Service, will deliver the commencement address at the Medical College of Virginia, Richmond, May 31.——Dr. William B. Porter is spending several months in Europe at medical centers, preliminary to assuming the full-time professorship of medicine at the Medical College of Virginia, Richmond.

Dr. Perkins Honored.—The Norfolk County Medical Society gave a dinner, February 24, at the Monticello Hotel, Norfolk, on the occasion of the fifty-fifth anniversary in the practice of medicine of Dr. Robert S. Perkins. Sixty-one members were present, and Dr. Joshua Warren White, president, presided. The speakers were Drs. Israel Brown, William L. Harris, Frank H. Hancock, Eugene L. Lowenberg, Stark A. Sutton, Edward E. Feild and Wilson E. Driver.

Society News.—Dr. Joseph E. Seebert addressed the Rockbridge County Medical Society, February 1, Lexington, on "Basal Metabolism: Methods," with the showing of apparatus.——The Arlington County Medical Society, at its last meeting, endorsed the movement of the American Legion to establish a hospital in that county.——Dr. Arthur W. Hammond, Amsterdam, was elected president of the Botetourt County Medical Society, March 8, for the ensuing year. Drs. Hugh H. Trout and George B. Lawson of Roanoke were the guests at this meeting.

WASHINGTON

Dr. Nelms Sentenced.—Dr. Milton A. Nelms, Walla Walla, was found guilty by a jury, March 14, of violation of the Harrison Narcotic Law, it is reported, and was sentenced to two years in the federal penitentiary on each of three counts, and to pay a fine of $1,000. The prison sentences are to be run concurrently.

University News.—The Eleventh Graduate Medical Lectures of the University of Washington will be given, July 18-22, by Drs. George W. Crile, Cleveland; Charles L. Mix, Chicago, and Charles L. Scudder, Boston. A fee of $15 covers the lectures and the social events which have been arranged. Checks should be made payable to the University of Washington, and addressed to Extension Service, Room 121, Education Hall, Seattle.

WEST VIRGINIA

Outbreak of Smallpox.—There were more than forty cases of smallpox reported in Logan County, March 19; it was decided to close the Logan district schools to students who had not been vaccinated. Three nurses in the Logan Hospital were reported to have contracted the disease.

Personal.—Dr. David Littlejohn has been appointed director of the division of rural sanitation of the state department of health to succeed Dr. James G. Townsend of the U. S. Public Health Service, who was transferred to the Pacific Coast. Dr. Littlejohn is president of the West Virginia Public Health Association.——Dr. William H. McLain, Wheeling, has been reappointed county health officer.

W. L. H. Moore Arrested.—The office of Dr. W. L. H. Moore, Glenville, was searched recently by state troopers on a search and seizure warrant, and among the things found, according to the Charleston *Gazette*, was a doctor's certificate which appeared to have been altered, and a federal alcohol permit of doubtful authenticity. Moore was arrested on a charge of practicing medicine without a license and, unable to furnish bond, was placed in jail to await action of the grand jury. In 1924, Moore became involved with the Ohio State Medical Board at the time that a "Dr." W. L. Hart was arrested near Marietta. The evidence gained by the state board then indicated that Hart and Moore were engaged in the manufacture of bogus diplomas. Copies of unsigned diplomas of the Royal College of Physicians and Surgeons, Dublin, Ireland, were seized at the time of Hart's arrest. Hart pleaded guilty to practicing medicine without a license at that time and was fined; the indictment did not include Moore; he was a resident of West Virginia.

WISCONSIN

Bill Introduced.—Senate bill 416 would regulate the sale, manufacture, distribution and use of narcotics.

GENERAL

Society News.—The American Chemical Society will hold its seventy-third meeting at Richmond, Va., April 11-16; among the speakers on Wednesday will be Dr. Victor C. Vaughan, Washington, D. C., whose subject will be "A Chemical Concept of the Origin and Development of Life."——The American Association of Medical Milk Commissions will hold its next annual conference, May 16-17, Washington, D. C., under the presidency of Prof. J. Howard Brown, Ph.D., Johns Hopkins University, Baltimore.

Embargo on Milk from Montreal and Vicinity.—The U. S. Department of Agriculture, on the advice of the Public Health Service, has ordered an absolute embargo against milk and cream originating within a radius of 200 miles of Montreal, Canada, on account of the danger from typhoid infection. Instructions have been issued to federal food and drug officials and collectors of customs at ports of entry to maintain the embargo until the source of infection has been definitely determined and the authorities are satisfied that the preventive measures taken are adequate to insure against infection. This action is taken under the federal food and drug act which authorizes the exclusion of articles that are dangerous to health. It has been alleged that the Montreal epidemic has been traced to one milk distributing agency which supplies one eighth of the city, and which gathers its milk from within a 200 mile radius of Montreal.

Guggenheim Fellowships Awarded.—The John Simon Guggenheim Memorial Foundation announced, March 20, the award of fellowships totaling $143,000 to sixty-three scholars, musicians, artists and writers from twenty-two states who will thus be enabled to study in Europe and elsewhere during the coming year. Among others, fellowships were awarded to the following:

Edward Frederick Adolph, Ph.D., assistant professor of physiology, School of Medicine and Dentistry, University of Rochester, to study the internal factors that control the size of organisms, particularly during growth, principally at the Kaiser Wilhelm Institute, Berlin.

William Ruthrauff Amberson, Ph.D., assistant professor of physiology, University of Pennsylvania School of Medicine, to study mechanisms involved in the electrical stimulation of nerve and muscle, principally with Dr. A. V. Hill, at University College, London.

Ralph Erskine Cleland, Ph.D., associate professor of biology, Goucher College; for studies of the chromosome constitution and behavior of the evening primroses (oenothera), as related to certain genetic problems, in consultation with European authorities.

Lewis Victor Heilbrunn, Ph.D., assistant professor of zoology, University of Michigan, for researches into the colloid chemistry of protoplasms, principally with Dr. Herbert Freundlich at the Kaiser Wilhelm Institute, Berlin.

Lloyd Hilton Reyerson, associate professor of chemistry, University of Minnesota, for investigations in the field of contact catalysis, principally with Prof. Herbert Freundlich at the Kaiser Wilhelm Institute, Berlin.

Report of Commonwealth Fund.—The five year program of the Commonwealth Fund on child guidance and mental hygiene is nearing completion. The Cleveland demonstration child guidance clinic has closed with arrangements for continuing the work under local administration. Cleveland is the seventh city to establish such facilities as a result of this program. The Philadelphia demonstration will close during

1927. The fund has completed demonstrations of visiting teaching in twenty-two communities; two failed, and the remaining eight of the original thirty are to be completed in June. The training of students in psychiatric social work is continuing, 175 students in all having received training. The future plans of the fund in this field include the establishment of an institute of child guidance, July 1, for the training of psychiatrists, psychologists and psychiatric social workers in child guidance work; with its opening the present bureau of child guidance will close, and with it all demonstration work in mental hygiene. Dr. Lawson G. Lowrey will be the director of the institute. The division of rural hospitals of the fund was established during 1926, and the first rural hospital is under construction at Farmville, Va. The annual report of the fund states that its work in Austria has shown progress in improving the standards of child health work in support from local sources. Emphasis has been placed in Austria on scholarships for training public health workers. The fund will complete its work in Austria, July 1, 1929. The child health program began about January, 1923, with the establishment of a demonstration in Fargo, N. D.; demonstrations were next started in Athens, Ga., and in Rutherford County, Tenn. The last demonstration was started in Marion County, Ore., in February, 1925. The cooperation of physicians in these demonstrations included pediatric examination of school and preschool children and infants, all conditions needing correction being referred to the practicing physician; a consultant service in pediatrics for physicians; cooperation in the conduct of local medical institutes and other measures by the local medical societies for the improvement of medical practice. During the year, the fund made ten grants either to continue or to initiate activities in mental hygiene and child guidance; one of these was an appropriation to Yale University of $50,000 a year over a period of five years for a department of mental hygiene. The Commonwealth Fund was established by Mrs. Stephen V. Harkness of New York, who died in March, 1926.

FOREIGN

China Takes Over Mental Hospital.—The Canton government in China has taken over the John Kerr Hospital for the Insane from the charge of Dr. Selden, who has been in Canton for about thirty years. (THE JOURNAL, March 19, p. 937).

Personal.—Major T. H. Symons, director-general, Indian Medical Service, has been elected president of the next congress of the Far Eastern Association of Tropical Medicine, which will meet in Calcutta, December 2-5.——Col. John G. Martin, M.D., Liverpool, has been appointed honorary secretary to the king of England, after many years of meritorious service in the territorial army medical corps.

International Medical Congress.—The fourth International Military, Medical and Pharmaceutical Congress will be held at Warsaw, Poland, in May. About 3,000 delegates representing forty countries will participate, but the United States will not be represented officially because of the failure of Congress to pass the Second Deficiency Appropriation Bill; it will be represented unofficially by representatives of the U. S. Public Health Service who may be in the proximity of Warsaw at the time of the congress. A sanitary-hygienic exhibit will be held in connection with the congress, which will consist of sections on (1) military field sanitary equipment; (2) scientific hospital equipment; (3) sanitary equipment of dwellings; (4) chemical and pharmaceutic material; (5) physicians' and dentists' office equipment, and (6) veterinary equipment. Details may be obtained from the American commercial attaché, Aleja Ujazdowska 36, Warsaw, Poland.

CORRECTIONS

Nasal Siphon Syringe.—The Nichols Nasal Syphon, Inc., write to THE JOURNAL to say that the device described by Dr. DeSushko in THE JOURNAL, February 26, is an infringement of their patent and that the idea of preinduced siphonage is not new.

Hospitals Accredited by State Board.—The Whidden Memorial Hospital (or Everett Cottage Hospital), Everett, Mass., is accredited by the Massachusetts State Board of Nurse Examiners. Information to the contrary was published in the Hospital Number of THE JOURNAL, March 12, p. 803. ——It was stated in THE JOURNAL, March 12, p. 799, that Sellers' Hospital, Anniston, Ala., is not accredited by the Nurses Board of Examination and Registration of Alabama. The statement was based on information supplied by that board, which now says that the hospital is accredited.

Foreign Letters

LONDON

(From Our Regular Correspondent)

March 19, 1927.

The Lister Centenary

The arrangements made for the Lister centenary celebration, which is being held in conjunction with the meeting of the British Medical Association in Edinburgh next July, include a public meeting, July 20. Lord Balfour will take the chair, and addresses will be delivered by Sir Watson Cheyne, at one time Lister's assistant; Professor Tuffier of Paris; Professor Harvey Cushing of Harvard University, and Dr. James Stewart of Halifax, Nova Scotia. Throughout the week of the association meeting, a museum of Lister relics, in the arrangement of which the directors of the Wellcome Historical Museum, London, have cooperated, will be on view. An illustrated Lister memorial volume has been prepared, and will be presented to each registering member of the association. The volume, edited by Dr. Logan Turner, contains a sketch of Lord Lister's life by his former house surgeon, Sir George Beatson of Glasgow; a series of short personal reminiscences; two of Lister's scientific addresses, and a series of letters of general interest. A number of striking comments which he made at various times in relation to the germ theory and the antiseptic system have been grouped together. Dr. Logan Turner writes on the lives of Lister's fellow residents in the Edinburgh Royal Infirmary during the summer of 1854. A chapter entitled "Surgery Prior to Lister's Time" is written by Mr. Alexander Miles; "The Influence of Lister's Work on Surgery" is contributed by Professor Fraser, and Professor Schäfer deals with Lister's work as a physiologist. Inscriptions will be placed on the walls of 11 Rutland Street and 9 Charlotte Square, the residences which Lister occupied while in Edinburgh. A donation of $125 has been given to the committee to be awarded as a prize for the best essay on "The Influence of Lister on Surgery," and the committee has added a gold medal. The competition is open to students and graduates of not more than one year's standing of any medical school in the British Empire.

Tests of Drunkenness

Some time ago a committee was appointed by the council of the British Medical Association "to consider and report on the present tests for 'drunkenness,' with recommendations as to their modification or improvement." The committee included representative physicians, police surgeons, magistrates and scientists. It has now presented its report. Its final conclusion is that "there is no single symptom due to the consumption of alcoholic liquor which may not also be a sign of some other pathologic condition." The committee thinks that the word "drunk" should always be taken to mean that the person concerned was so much under the influence of alcohol as to have lost control of his faculties to such an extent as to render him unable to execute safely the occupation on which he was engaged at the material time. Under the heading of tests of whether a person has recently consumed alcohol, it is stated that "for the purpose of determining whether or not a person has consumed alcoholic liquor there is no test of such ready application and value as smell." The intensity of the smell varies according to the nature of the liquor consumed and to the time since its consumption. If there is no smell of alcoholic liquor in the breath of a person seen within a reasonable time after his arrest, it is improbable that he has recently consumed alcohol, and search should be made for some other cause of his condition. The committee also points out that keenness of the sense of

smell varies in different individuals who may be applying the test, and that the smell of alcoholic liquor in the breath may be disguised by various substances. Dealing with the impairment of the control of faculties, the committee states that: 1. There are no tests universally applicable for determining the amount of alcohol which would render a person incapable of carrying on his occupation in a proper manner, as the effect of alcohol varies within wide limits in different individuals, and in the same individual under different conditions. Fine shades of self-control might be lost without any apparent signs of alcoholic intoxication. 2. The first effect of alcohol is on the higher centers and is subjective, and even if objective symptoms do not occur, the subjective effect of alcohol may be sufficient to make it unsafe for an individual to be in a responsible position; for example, in charge of a mechanically propelled vehicle. 3. There is no single test taken by itself which would justify a physician in deciding that the amount of alcohol consumed had caused a person to lose control of his faculties to such an extent as to render him unable to execute safely the occupation on which he was engaged at the material time. A conclusion can be arrived at only by a combination of several tests and observations, such as general demeanor; state of the clothing; appearance of conjunctivae; state of the tongue; smell of the breath; character of the speech; manner of walking, turning sharply, sitting down and rising or picking up a pencil or coin from the floor; memory of incidents within the previous few hours and estimation of their time intervals; reaction of the pupils and the character of the breathing, especially in regard to hiccup.

Report of the Medical Research Council

The annual report for 1925-1926 of the medical research council carries the study of a number of the problems of disease a stage further. Mrs. Mellanby has done further work on the formation of the teeth and on the influence of diet on this formation. She has found that in the absence of a sufficiency of vitamin D the teeth are not correctly formed, however sound they may look. She has shown that dental disease attacks badly formed teeth much more readily than teeth properly formed. The conclusion seems to be that "the teeth of a nation may give a sensitive index of the degree to which the constitution of the diet in detail is adapted to the complex needs of the population under the governing conditions and customs of urban and rural life." With regard to filter-passing viruses, some progress is recorded. It has been found possible to immunize ferrets from distemper by inoculation of virus treated with formaldehyde. The resistance produced in dogs by similar inoculations was not so great, but there is reason to hope that by primary inoculation of dead virus, followed by a mild distemper infection while the animal is refractory to the disease, a useful method for protecting dogs will be obtained. Obvious analogies can be drawn between distemper in dogs and disorders such as influenza in man. The right weapons for attack on influenza are, perhaps, only to be forged in the easier experimental study of the animal maladies nearest akin to it. Referring to the difficulties which have to be faced regarding diseases caused by filter-passing viruses, it is stated that: "In some diseases in this group, for instance, encephalitis lethargica and poliomyelitis, almost no progress seems to have been made, in spite of the arduous efforts of many able men. Exhaustive observational study of an epidemic of encephalitis has failed to discover any clues by which the movements of the disease among the population can be followed or controlled. The viruses cannot yet be cultivated outside the body, or seen, and only indirect methods of study are available."

PARIS

(From Our Regular Correspondent)

March 9, 1927.

The Use of Ether for Lavage of the Peritoneum Following Laparotomy

Ether for lavage of the peritoneum following laparotomy, a method that has come into use through Dr. Souligoux, has in recent years found many advocates among French surgeons. After a laparotomy in a septic field, or possibly merely as a preventive measure, they apply 200 Gm. or more of ether intraperitoneally before closing the abdomen. Some surgeons have used a whole liter of ether. At a recent meeting of the Société de chirurgie de Paris, a discussion arose on the subject. Dr. Thiéry announced that drainage alone, in purulent peritonitis, had afforded him 33 per cent of successful results but that, by combining with it ether lavage, he had obtained from 80 to 85 per cent of successful outcomes. He stated further that he had had a series of laparotomies for suppurative salpingitis with only 2 per cent of mortality. Surgeon Basset, however, reported one fatal case with black vomit after such lavage, although the quantity of ether employed had not been excessive. Basset submitted the theory of a subacute intoxication of the liver. M. Chevrier emphasized that etherization is always accompanied by marked postanesthetic cholemia, which, however, disappears after a few hours. He explains the fatality reported by Basset as most likely due to excessive intra-abdominal pressure occasioned by the vaporization of the ether and causing compression of the large venous trunks, or, possibly, intestinal torsion had been produced by the same mechanism. The Trendelenburg position favors such torsion. The patient should be returned to the horizontal position before the abdomen is closed following the application of ether. M. Mauclaire stated that, a few years previously, he had observed fatal syncope following the application of from 100 to 200 Gm. of ether to Douglas' culdesac in a case of generalized peritonitis. M. Charles Viannay of St. Etienne had a case of fatal intoxication in a young woman operated on for a sarcoma of the broad ligament. He had introduced 125 Gm. of ether. Cyanosis developed; the pulse became scarcely perceptible, and the patient died at the end of two hours. But it should be explained that the laparotomy had been laborious, having lasted an hour and a quarter, and that ether anesthesia had been employed. On account of this experience, he had given up ether lavage, and used preferably wide drainage in suspected cases. M. Jean Louis Faure stated that he never uses ether lavage, but is content to employ the Mikulicz drainage method.

A Home for Gassed Soldiers

A special home for the benefit of the victims of gases used in the recent war has been established in Paris, 55 rue Bobillot, and officially dedicated by M. Louis Marin, minister of pensions. A federation of the war gassed numbering 30,000 members collected the necessary funds for the home. At the present time, the law accords those who are unable to work an annual pension of 7,000 francs. The building contains rooms for treatment with modern electric and radiologic equipment. A special section of the building is reserved for tuberculous patients. The federation has also begun the construction of a dispensary and is planning the creation of a "sanitary village" in which their members may receive open-air treatment.

Respiratory Diseases of Spirochetal Origin

The number of cases of respiratory diseases of spirochetal origin appears to be increasing. However, the increase may be only apparent, coming from the fact that now more microscopic examinations are being done than formerly.

Addressing the Société de pathologie comparée, Dr. Lafosse pointed out that, in the region of Vincennes, near Paris, he had observed in four years thirty-eight cases of bronchitis of spirochetal origin, which were not recognized until they reached the office public d'hygiène, to which they had been referred as tuberculous. All these patients improved rapidly under arsphenamine or bismuth treatment. Lafosse advances the theory that these spirilli came from the buccal cavity, where they are normal occupants, and that they suddenly became pathogenic owing to some unknown cause. Professor Vincent inclines to the same opinion, and incriminates in these cases, as in others of abscess and gangrene of the lung, *Spirillum dentium*.

The Smoke Evil in Large Cities

The Council on Hygiene of the Department of the Seine has been investigating the menace in smoke for the health of Paris. Aside from vitiation of the atmosphere, the researches of Dr. Trillat at the Pasteur Institute have emphasized that smoke mixed with fog, on damp, still days, constitutes an excellent nutritive medium for air microbes, owing to the presence, in suspension, of particles of ammonium sulphate and ammonium carbonate. Hence, the prevalence, especially in autumn and spring, of endemic seasonal diseases, such as influenza, scarlet fever and measles. The municipal council has offered a substantial prize for the invention of an apparatus that will destroy smoke before it leaves the chimney. When such apparatus shall have been officially adopted, a fine will be imposed on factory owners who fail to install it.

Deaths

Three eminent physicians have died during the past week. Dr. Gilbert, who succumbed, March 4, to pneumonia, at the age of 69, was professor of clinical medicine at the Faculté de médecine de Paris, member of the Academy of Medicine, and commander of the Legion of Honor. His principal works dealt with diseases of the liver. He published, in collaboration with Brouardel, a treatise on medicine in ten volumes.

M. Daniel Berthelot, who died a few days later, was professor of physics at the Faculté de pharmacie de Paris. He devoted himself more particularly to the determination of high temperatures, chemical decomposition of albumins, and the properties of various radiations of the spectrum. He made extensive researches on ultraviolet rays. He was a member of the Academy of Medicine and of the Academy of Sciences.

Dr. Ribierre, hospital physician, agrégé professor at the Faculté de médecine, physician to the Hôpital de la Charité and author of works on dyspepsia and nervous diseases, succumbed to one of the diseases that he had himself described; namely, to disorders of the sympathetic nervous system, complicated with abortive Parkinson's disease.

School of Malariology

A special school of malariology, attached to the hygienic institute of the Faculté de médecine de Paris, has recently been established with the aid of the health section of the League of Nations. From June 7 to July 13, 1927, the school will give a series of thirty-two hourly lectures, in six series, each followed by a three-hour laboratory period. A special diploma will be given to those who complete the course and pass the two final examinations, provided they are French doctors of medicine or foreign physicians holding a doctor's diploma from the University of Paris. A certificate of diligence will be given to all students who complete the course but do not take the examinations. The tuition fee is 850 francs. Foreign candidates who are recommended by the administrations of the public health services in their respective countries may apply, in order to secure admission to the course, to the health section of the League of Nations at Geneva. A number of scholarships are available, and will be granted on the basis of requests presented by foreign sanitary administrations.

JAPAN

(From Our Regular Correspondent)

Feb. 1, 1927.

Nurse Training

The training of nurses to meet the requirements of the present time has recently been much talked of in all parts of the country. The present education of our nurses, especially their preparatory schooling, is far from satisfactory. For this reason, St. Luke's Hospital in Tokyo has recently commenced training of girl high school graduates as nurses. Nurses trained in Red Cross hospitals now rank highest both in skill and in general qualifications, and their further improvement is greatly desired. The Oriental Red Cross Conference held in Tokyo last winter passed a resolution for training public hygiene nurses. The school sanitary section of the Educational Department is endeavoring to employ school nurses more widely, even in the country. At the first trial, in May, a short course for school nurses will be given to those women who want to become school hygiene workers.

Some local governments are reported to have planned to give women teachers a course during the summer vacation in school sanitation and school nursing. Those teachers will temporarily take upon themselves the duties of school nurses until nurses are installed in every school. In Odaru, Hokkaido, where six school nurses are stationed, the sanitary condition of the schools is reported greatly improved. Out of 3,050 cases of trachoma in the primary schools, 1,366 children recovered, and out of 797 cases of scabies and favus, 554 children are cured.

Silkworms and "Sake"

According to the Osaka *Daily News*, a discovery respecting the feeding of silkworms has been made by Mr. Nakai, expert of the Okayama Prefectural Laboratory for Sericulture. He found a way to feed the worms on wheat flour and "sake," an intoxicating drink made from rice. In tests during the past two years, he found that the consumption of mulberry leaves is greatly reduced if the worms are fed by his method. When 30 Gm. of "sake," mixed with about ten times as much water and some flour, was given to 400 worms a saving was made of about 60 per cent in the total of mulberry leaves required by the worms. The method is a benefit not only from the economic but also from the technical point of view, because the alcohol seems to improve the condition of the worms.

Leprosariums

The number of leprosy patients was officially reported as 1,500 in 1924, but the real number is probably more than that. The government has presented to the diet a budget for enlargement of one of the five government leprosariums. If the budget passes the diet, the accommodations afforded by these five leprosariums will be 5,000.

Sick Nurses and Infectious Disease

The metropolitan police bureau of Tokyo reports that there were eighty-four and ninety cases of infectious disease (typhoid, paratyphoid, dysentery and scarlet fever) among the nurses in Tokyo in 1925 and 1926, respectively. Of the group of ninety nurses, eighteen were attached to the hospitals and the rest belonged to the nurses' associations. Fifty-three were pupil nurses, who seemed not to have been thoroughly instructed in preventive measures or else not to have been given adequate preventive inoculations. Of the seventy-nine patients who had typhoid or paratyphoid, nine-

teen are dead and five are still confined to bed. This percentage (24.05), when compared with that of the general population (19.57), shows that the medical education of nurses is insufficient.

New Experiment of Skin Infection

At the Takeo Laboratory of Osaka Medical College, under the direction of Dr. Sata, Drs. Miyai and Matsuzaki have for a few years been engaged in experimenting on the possibility of causing infection with tubercle bacilli through intact and healthy skin. They recently published their third report showing that typhoid bacilli and the cholera vibrio, when smeared on the intact skin, can easily pass through, reaching lymphatic glands in a short time, and in a few hours the infecting agents can be seen in various viscera and in the blood. The government infectious disease laboratory supports the statements of the investigators.

Antituberculosis Work

This year the sanitary section of the Metropolitan Police Bureau will redouble its efforts in antituberculosis work. In Osaka, the largest city in Japan, during the last ten years (1917-1926) out of the average population of 2,832,164, the victims of tuberculosis were 7,964; women between 15 and 20 years of age rank first, numbering 834 among those victims. The municipal sanitary department started making a statistic investigation of tuberculosis cases last summer, solely with the practitioners' assistance. In the near future, compulsory reporting of the cases will be required. It is reported that April 27 will be antituberculosis day.

ITALY

(From Our Regular Correspondent)

Feb. 15, 1927.

The Urologic Congress

The Società italiana di urologia held recently in Padua its fifth congress, under the chairmanship of Professor Ferria and inaugurated by Professor Bodrero, rector of the university of that city.

THE VESICORENAL REFLUX

Dr. Ravasini of Trieste presented the official communication on vesicorenal reflux, illustrating the mechanism of backward flow of urine from the bladder into the renal pelvis. He divided reflux into congenital (primary congenital dilatation of the urinary passages) and acquired forms. The congenital form is rare. The second type will be found rather frequently if a systematic search for it is made. It may be found in tuberculosis of the ureter, with or without cystitis. There may be a reflux in sclerosing periureteritis and ureteritis (due to lithiasis [rarely], or to pyelonephritis or pyelonephrosis); in inflammatory and distended conditions of the bladder following the action of caustics; in diverticula of the bladder, and in tumors of the bladder. Other causes of vesicorenal reflux may be traumas (repeated passage of calculi, operative interventions), prostatic hypertrophy, carcinoma and abscesses of the prostate, urethral strictures, diseases of the nervous system, and pregnancy. The treatment will be chiefly causal, and may be either conservative or surgical. In the discussion that followed, Lepoutre of Lille, Pavone of Palermo, and Lasio of Milan took part. Lasio referred to twenty cases that had come under his observation, and suggested that two types of reflux, nephrogenic and cystogenic, be distinguished. The treatment is less difficult in the cystogenic forms.

DIAGNOSIS AND TREATMENT OF VESICULITIS

On the subject of vesiculitis, Dr. Chiandano of Turin was the chief speaker. Following Hyman and Sanders, he distinguishes two types of spermatocystitis: amicrobic and infective. The former is not common but may be the consequence of sexual perversions or of mechanical factors (cycling, horseback riding), or may possibly be of toxic origin. The latter is chiefly the result of gonorrhea. After speaking of various methods of diagnosis (spermoculture, urethroscopy, roentgenology), the author discussed various methods of treatment: vesicular massage, local hyperemia, diathermy, vasotomy, and injections of fluid medicaments by way of the vas deferens; also vesiculotomy or vesiculectomy.

In the discussion that followed, a number took part; among others, Froenstein of Moscow, Bloch of Padua, Colombino of Turin (who expressed doubts as to the existence of the amicrobic type), and Lilla of Leghorn.

The Antirabic Institute in Genoa

A new antirabic institute was opened this month in Genoa. It prepares specific vaccines and gives treatment to persons bitten by rabid animals or suspected to be such. The institute has modern equipment. It is controlled by the Direzione de servizi comunali d'igiene e di sanità publica. The director is Dr. Tanda, head of the municipal bacteriologic laboratory. The service will be free for the poor, and, in order to lighten their expenses during their stay in the city, arrangements have been made to give them reduced hotel rates.

Courses in Care of Children

In the pediatric clinics of some of the Italian universities, special courses in the physiologic pathology of infancy are being held this year. Courses for graduate physicians extend over a period of three months; for midwives, over four months. Those who pass the examinations in course will receive a diploma in care of children, which henceforth will be a requirement for applicants for positions in the pediatric ambulatoriums and institutes controlled by the Opera nazionale per l'assistenza della maternita e dell'infanzia. In Rome, the courses will be held under the supervision of the Italian Red Cross.

Aid to Children of Physicians Who Died During the War

Under the chairmanship of Generale Medico F. Della Valle, the committee of the Opera di assistenza agli orfani dei medici morti in guerra met recently in Rome. Dr. Bocchetti, the secretary, submitted his annual report. During the fiscal year 1925-1926, forty-five orphans were given aid; forty-one received scholarships and family subsidies so called, and four were provided for in the Istituto orfani sanitari di Perugia. All the orphans assisted were promoted in school. The scholarships of all were therefore renewed for another year; in case any had been promoted to higher schools, their allowances were increased. In addition, seven new scholarships were granted. An appeal has been made to all Italian physicians for contributions to the fund.

Sanitary Control of Importations of Maize

The minister of the interior has called the attention of the prefects to the need of greater vigilance in the inspection of imported maize. A circular establishes new regulations, chief of which are the following: 1. Maize that is suspected of being contaminated must be actually treated as such, not only from the hygienic point of view but also as regards freight classification, since the railway freight rates are higher for maize not destined for human consumption. 2. For maize recognized as contaminated the following modes of disposal are available: (*a*) if it is sent to a distillery, it must be under bond and subject to the control of federal customs agents; (*b*) if it is to be utilized by starch factories (not for food purposes), it must be shipped under seal, subject to inspection by the local sanitary authorities at the point of destination, and (*c*) if it is to be used as animal feed, it must be denatured by processes that do not cause further deterioration.

NETHERLANDS

(From Our Regular Correspondent)

Jan. 14, 1927.

Fractures of the Leg

In the daily press, recently, the statistics of invalidity claims allowed persons suffering accidents in mines were compared with the figures for accidents befalling the general public. Miners have an insurance organization that is distinctly their own and also an independent hospitalization service. A journal contained the statement over the signature of a physician that only 2 per cent of invalidity was granted miners who had suffered leg fractures in the mines, whereas 30 per cent of invalidity was allowed in general cases of leg fracture occurring throughout the country. The enormous difference tended to incriminate the members of the medical profession who had given the treatment in the majority of the fracture cases. Dr. Brocx, one of the physicians at the head of the Rijksverzekeringsbank, the central insurance organization for occupational accidents, examined all the cases that were presented over the period from 1916 to 1920, all of which reports were rendered after a late examination of the persons injured.

Instead of a difference between 2 and 30 per cent, Dr. Brocx concludes that the true figures are around 8 and 14 per cent. During the period studied (1916-1920), of the annual total number of accidents amounting to approximately 80,000, there were 20,000 persons injured in the lower limbs, among which there were nearly 600 leg fractures. The figures for the years 1916-1920 show that in the mines there was 87.55 per cent of complete recoveries without invalidity; in the country at large, 85.01 per cent; among the accidents in the port of Amsterdam, 78.71 per cent, and among the accidents in the port of Rotterdam, 75.64 per cent.

First Aid in Industrial Accidents

The commission charged with the study of the organization of first aid in industrial and occupational accidents has emphasized public courses in first aid. Such courses, owing to lack of funds, have not been extended to the working population as a whole but have been confined to workers in factories, in the ports and in the fishing industry. The prime object to be attained for the present is the development of instruction in first aid methods among the rural population.

A Special Fund for the Advancement of Radiology

The Nederlandsche Vereeniging voor Electrologie en Roentgenologie has just celebrated the twenty-fifth anniversary of its foundation. On that occasion, the assembly decided to create a special fund with the object of promoting researches in radiology. The fund will be established in memory of Wertheim-Salomonson, the first exponent of radiology in the Netherlands. It was decided further to institute a prize to be awarded every five years to the author of the best work on radiology.

Criminal Abortion

At the annual meeting of the Société d'histoire de la médecine, Dr. Van Ballen-Blanken gave an account of the history of criminal abortion and of the legislation applicable to the subject. Abortion is very ancient. It is mentioned in the book of Exodus, and also in Flavius Josephus. It was Emperor Severus who established in the third century the first penalty for the practice of abortion. Until 1809, the year in which the Napoleonic penal code was introduced in the Netherlands, the exercise of judicial authority in the matter in the Netherlands was influenced to a great extent by the ecclesiastical theories, which distinguished two degrees of gravity in cases of abortion, according as the fetus had or had not human form, with which was connected as a corollary the question as to whether it was or was not endowed with a soul. The Napoleonic penal code remained in force until 1886, in which year it was superseded by the Code of Holland, which makes a distinction according as to whether the abortion was performed with or without the consent of the mother.

Prematrimonial Medical Examinations

The Association for Prematrimonial Medical Examinations has established at The Hague a consultation center to which several specialists are attached.

An Investigation of Hygienic Conditions in the Automobile Industry

Dr. Sleeswijck, professor of hygiene at the polytechnic school in Delft, has been investigating, with the aid of the trade unions represented therein, hygienic conditions in the automobile industry. He has sent to the persons concerned a questionnaire, in which he requests precise information on the duration of working hours, the possible existence of certain occupational diseases or ailments, and the conditions and qualifications for the driving of cars. The inquiry comprises likewise an investigation of workshop conditions, including analyses of the air in the shops.

BERLIN

(From Our Regular Correspondent)

March 12, 1927.

Old Age Pensions for Berlin Physicians

In view of the economic stress that still prevails among German physicians, more particularly in the large cities, the Chamber of Physicians (*Aerztekammer*) of Berlin has been considering the plan of establishing a system of old age pensions on a large scale, based on a form of compulsory insurance. On account of divergent opinions among certain medical groups that have contended they were not adequately represented in the Chamber of Physicians, it was thought advisable to take a general vote on the subject before going ahead with the project. Consequently, a postal card was sent to every physician in Berlin with the request that he take a definite stand for or against such a system of insurance for physicians. On the result of such voting was to depend the future action of the Chamber of Physicians; whether, before the next election, it will introduce an old age pension system; whether it will ask for further proposals, or whether it will give up for the present the idea of a compulsory insurance system. The objections that are raised against compulsory insurance by certain medical groups are that the advantages of such insurance that accrue to the older and less well-to-do physicians would have to be realized in part by the imposition of heavier burdens on the younger and more prosperous physicians. Whereas in the provincial districts such a form of insurance has met with widespread approval, in the large cities the relations of physicians to one another are of such an unintimate character that it looked as if the individualistic tendencies everywhere present might be stronger than any social or group consciousness. The result of the inquiry has proved to be in accordance with the foregoing assumption. Nearly two thirds of the Berlin physicians voted against the introduction of compulsory insurance. However, of the 5,400 physicians residing within the district of the Berlin-Brandenburg Chamber of Physicians, around 1,800 failed to reply to the inquiry. How low the incomes of many physicians in Berlin actually are may be seen from an inspection of the table that has been prepared, on the basis of the official list of taxpayers, as an exhibit in connection with the proposed insurance system. Not less than 18.6 per cent of Berlin physicians pay an income tax under 100 marks, or $24.

The adjoining tabulation gives a general survey of financial conditions as revealed by the list of physicians of Berlin paying an income tax.

Assessed Income Tax	Percentage of Physicians of Berlin from the Yearly Classes Born Between 1866 and 1898
Under 500 marks ($119)	58.4
500-1,000 marks ($119-$238)	23.7
1,000-1,500 marks ($238-$357)	8.9
1,500-2,000 marks ($357-$476)	3.6
Above 2,000 marks ($476)	5.4

Inoculation Against Tuberculosis

The endeavors to secure immunity against tuberculosis have heretofore offered little prospect of success because it was assumed that immunity could be brought about only by infection. The production of immunity by means of virulent bacilli could not be considered because new sources of infection were thus created. Therefore, attempts were made to produce immunization with avirulent strains; for example, Friedmann with his turtle bacillus and, more recently, Calmette with living bovine tubercle bacilli. On the other hand, Dr. Langer, who is connected with the Reichsanstalt zur Bekämpfung der Säuglingssterblichkeit, has been working with killed tubercle bacilli, as he stated recently in an address before the Berliner Medizinische Gesellschaft. He succeeded in bringing about a resorption of the killed bacilli and in producing a changed reactivity of the body, a true allergy, which persisted for several months. For more than two years, trials of the effectiveness of such inoculation have been carried on in the tuberculosis welfare centers in Neukölln and Spandau. As the number of infants exposed to infection in the family is relatively small (one figures usually ten such infants for each 100,000 inhabitants), the number of observations is necessarily small. Trials of the Langer vaccine have been made also with 120 apes in the Zoological Gardens and the results have been satisfactory. An account of his experiences in the tuberculosis welfare center in Neukölln has been given by Dr. Zadek, who took twenty-five infants immediately after birth from their contaminated environment and found quarters for them in the Neukölln Hospital. He inoculated the infants with the Langer vaccine and after three months returned them to their contaminated families, with the result that not a single case of tuberculosis has developed among them as yet. However, Professor Goldscheider has called attention to a possible source of error in that the first three months of life may be the period when the danger from infection is greatest. Dr. Ballin of Spandau reported likewise good results with eleven children. Prof. Martin Hahn of the Hygienic Institute, Neufeld of the Institute for Infectious Diseases and A. Möller raised objections to the experimental bases of the inoculations with the Langer vaccine, while Lange, of the federal public health service, confirmed the experiments.

Marriages

MASHEL F. PETTLER, Beaver Falls, Pa., to Miss Florence Alma Rosenthal of Cleveland, March 24.

SHATTUCK WELLMAN HARTWELL, St. Paul, to Miss Kathleen Gemmell of Minneapolis, March 10.

CHARLES EDWARD WILEY to Miss Leone Lucille Lovejoy, both of Maywood, Ill., March 26.

JOHN ROY POLLOCK to Miss Hazel Hecteman, both of Quincy, Ill., February 12.

JOSEPH ALOYSIUS LA NASA to Miss Leola Dalton, both of New Orleans, January 8.

JAMES PARKS GRIER of Rochester, Minn., to Miss Jessie Turner, February 26

Deaths

Joseph Yates Porter, Sr. ⊕ Lieutenant Colonel, U. S. Army, retired, Key West, Fla.; Jefferson Medical College of Philadelphia, 1870; appointed acting assistant surgeon in U. S. Army, July, 1870; in charge of government relief measures during yellow fever epidemic at Jacksonville in 1888; one of the first to support the mosquito transmission theory of yellow fever; appointed deputy surgeon general with the rank of lieutenant colonel, and in 1907 retired by act of congress; formerly quarantine inspector U. S. Public Health Service; past president of the Florida Medical Association; for many years state health officer of Florida; president of the State and Provincial Boards of Health, 1909-1910; camp surgeon at Camp Joseph E. Johnston during the World War; aged 79; died, March 16, of aortic insufficiency.

Clarence Bruce King ⊕ Chicago; University of Illinois College of Medicine, Chicago, 1898; formerly adjunct professor of neurology and psychiatry at his alma mater, and professor of psychiatry, Loyola University School of Medicine, and the Chicago College of Medicine and Surgery; veteran of the World War; aged 53; died, March 23, at the West Side Hospital, of septicemia, due to a streptococcus sore throat.

William Louis Wilson ⊕ Hinsdale, Ill.; Northwestern University Medical School, Chicago, 1896; at one time instructor of dermatology, Rush Medical College, Chicago; past president of the DuPage County Medical Society; formerly on the staff of the Lakeside Hospital, Chicago; aged 57; died, March 17, at St. Luke's Hospital, Chicago, of acute pancreatitis.

Johnston Burnside Kennedy, Detroit; Michigan College of Medicine, Detroit, 1885; emeritus professor of surgery, Detroit College of Medicine and Surgery, formerly president of the Detroit Board of Health and county physician; on the staff of the Grace Hospital; aged 68; died, March 5, of cerebral hemorrhage.

Chester L. Evans, Oregon, Mo.; Northwestern Medical College, St. Joseph, 1882; past president of the Holt County Medical Society; formerly professor of chemistry and electrotherapeutics at his alma mater; aged 69; died January 30, at the Mission Methodist Hospital, St. Joseph, of chronic nephritis.

Zachariah Nason ⊕ Kansas City, Kan.; College of Physicians and Surgeons, Baltimore, 1888; formerly professor of clinical obstetrics, University of Kansas School of Medicine, Rosedale; on the staff of the Bethany Hospital; aged 72; died, February 20, of retroperitoneal sarcoma.

Ira Jesse Dunn ⊕ Erie, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1891; member of the American Academy of Ophthalmology and Oto-Laryngology; member of the board of corporators of the Hamot Hospital; aged 63; died, March 9, of heart disease.

Henry Grady Cannon ⊕ Newport, R. I.; Atlanta College of Physicians and Surgeons, 1912; past assistant surgeon, lieutenant, U. S. Navy; on the staff of the U. S. Naval Hospital, where he died, February 24, of chronic myocarditis and cerebral thrombosis, aged 37.

William A. Gardner ⊕ Cincinnati; University of Cincinnati College of Medicine, 1912; professor of toxicology, Cincinnati College of Pharmacy; member of the Cincinnati Public Health Department for four years; aged 39; died, March 16, of pulmonary tuberculosis.

Abbott Carson Combes ⊕ Elmhurst, N. Y.; Bellevue Hospital Medical College, New York, 1879; founder of a sanatorium in Corona which bears his name; aged 69; died suddenly, March 16, of heart disease.

Thomas Harris Turner, Northville, Mich.; University of Michigan Homeopathic Medical School, Ann Arbor, 1882; aged 66; died, March 14, at the Grace Hospital, Detroit, of myocarditis and arteriosclerosis.

Henry Young, Manson, Iowa; Chicago Medical College, 1872; formerly member of the state legislature and mayor of Manson; aged 80; died, in March, at a hospital in Fort Dodge, of injuries received in a fall.

James Harlow Graham, Manilla, Iowa; Keokuk Medical College, College of Physicians and Surgeons, 1901; member of the Iowa State Medical Association; aged 73; died, February 19, of uremia.

Charles Mason Fuson, Jump River, Wis.; Barnes Medical College, St. Louis, 1908; served during the World War; aged 51; died, March 9, at Marshfield, following an operation for gastric ulcer.

William T. Rogers, Coleman, Ga.; University of Pennsylvania School of Medicine, Philadelphia, 1872; member of the Medical Association of Georgia; aged 78; died, March 17, of senility.

William Ernest Tryon, Minneapolis; Bennett College of Eclectic Medicine and Surgery, Chicago, 1885; aged 70; died, in March, at the Eitel Hospital, of coronary sclerosis and diabetes.

Thomas A. Bohannon, Burlington, N. C.; Medical College of Virginia, Richmond, 1861; Civil War veteran; aged 86; died, March 10, as the result of injuries received in a fall.

Thomas Britt Delaney, Lowell, Mass.; Maryland Medical College, Baltimore, 1913; aged 38; died, March 12, at St. Johns Hospital, of coronary embolus, following herniotomy.

Elmer Hill Robb, Retreat, Pa.; State University of Iowa College, Iowa City, 1890; on the staff of the Retreat Mental Hospital, where he died, March 12, of heart disease, aged 64.

Ralph Jenkins, Washington, D. C.; New York Homeopathic Medical College and Flower Hospital, New York, 1887; aged 61; died, February 9, of coronary thrombosis.

John Hepburn Yarnell, Washington, D. C.; George Washington University Medical School, Washington, 1881; aged 70; died, March 9, of mitral regurgitation.

Mose Milton Hyman ✠ Detroit; Detroit College of Medicine and Surgery, 1917; served during the World War; aged 34; died, March 15, of heart disease.

Adolph H. Leviton ✠ Chicago; Colllege of Physicians and Surgeons, Chicago, 1894; aged 68; died, March 29, at St. Anthony's Hospital, of angina pectoris.

Alexander Hamilton Barber, Minneapolis; Long Island College Hospital, Brooklyn, 1869; Civil War veteran; aged 83; died, March 9, of heart disease.

Charles A. Clinton, San Francisco; University of California Medical School, San Francisco, 1881; aged 76; died, March 12, of chronic myocarditis.

R. T. Wilson Herald, Kelowna, B. C., Canada; Queen's University Faculty of Medicine, Kingston, 1890; died, January 1, at Fernie, of pneumonia.

Kimber Cleaver McWilliams ✠ Shamokin, Pa.; Jefferson Medical College of Philadelphia, 1884; aged 69; died March 13, of heart disease.

Albert A. Seibert, Pottsville, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1888; aged 61; died, March 3, of heart disease.

Thomas T. Smith, Bald Prairie, Texas; (licensed, Texas, under the Act of 1907); aged 67; died, Dec. 2, 1926, of carcinoma of the stomach.

Orlando Worthington Lusher, Point Pleasant, W. Va.; Chattanooga Medical College, 1899; aged 69; died, March 11, of heart disease.

Mary Elizabeth George, Memphis, Tenn.; Cleveland Medical College, 1893; aged 68; died, March 1, of cerebral hemorrhage.

William Jones, Aurora, Ill.; Chicago College of Physicians and Surgeons, 1895; aged 59; died, March 14, of bronchopneumonia.

Leroy Ballantyne ✠ Ogden, Utah; St. Louis College of Physicians and Surgeons, 1920; aged 39; died, March 5, of pneumonia.

John Bower Stine, Philadelphia; Jefferson Medical College of Philadelphia, 1882; aged 65; died, March 11 of chronic myocarditis.

John Forrest Bell ✠ Elgin, Ill.; Jefferson Medical College of Philadelphia, 1890; aged 63; died, March 16, of heart disease.

John H. Simmons, Sulphur, Okla.; University of Tennessee College of Medicine, Memphis, 1888; aged 70; died, March 13.

John Herbert Twombly, Manchester, N. H.; Medical School of Harvard University, Boston, 1872; aged 78; died, March 7.

Burgess Keaton Wood, Oklahoma City, Okla.; Eclectic Medical Institute, Cincinnati, 1866; aged 81; died, March 12.

Joseph Abromaitis ✠ Baltimore; University of Moscow, Russia, 1893; aged 59; died, March 23, of pneumonia.

Aaron D. Booth, Noblesville, Ind.; Medical College of Ohio, Cincinnati, 1874; aged 78; died, March 9, of senility.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION, OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER GENERAL MATERIAL OF AN INFORMATIVE NATURE

MORE MISBRANDED NOSTRUMS

Abstracts of Notices of Judgment Issued by the Bureau of Chemistry of the United States Department of Agriculture

Tonica Para Los Nervios.—The Henry S. Wampole Company, Baltimore, Maryland, shipped to Los Angeles in December, 1925, a quantity of "Tonica Para Los Nervios," which the federal authorities declared misbranded. Some of the claims made (in Spanish) on the bottle label were:

"An efficacious remedy for nervous prostration, nervous exhaustion, nervous debility, irritability caused by nervous tension, insomnia, hysteria, etc."

"For all cases in which the nervous system has been debilitated and the resistance lowered by excess of work, fatigue, excessive preoccupations, deficient alimentation and excess of any kind."

When analyzed by the federal chemists, the stuff was reported to contain calcium, sodium, potassium and strychnine glycerophosphates, a trace of lecithin, sugar, alcohol and water. The claims made for the preparation were declared to be false and fraudulent, and in February, 1926, the Henry S. Wampole Company admitted the allegations. Judgment of condemnation and forfeiture was entered and the court ordered that the product be released to the Wampole concern on payment of the costs and the execution of a bond, conditioned in part that the preparation be relabeled in a satisfactory manner.—[*Notice of Judgment 14478; issued November, 1926. Chem. Suppl. 220.*]

Boro-Pheno-Form.—The Dr. Pierre Chemical Company of Chicago shipped in July, 1926, a quantity of "Boro-Pheno-Form," which the federal authorities held was misbranded. Some of the claims made for this product were:

"For the treatment of diseases peculiar to woman it remains without a rival.

"For the diseases and inflamed condition of the Pelvic organs such as Leucorrhea (the whites), Ammenorrhea (Suppression), Dysmenorrhea (painful periods), Menorrhagia (bleeding), Ovaritis (inflammation), Boro-Pheno-Form is indispensable."

When analyzed by the federal chemists the Boro-Pheno-Form suppositories were found to contain cocoa butter, quinine sulphate, zinc sulphate, boric acid and traces of formaldehyde and carbolic acid. The authorities held that the claims made for the product were false and fraudulent, and, in October, 1926, judgment of condemnation and forfeiture was entered and the court ordered that the product be destroyed.—[*Notice of Judgment 14694; issued March, 1927. Chem. Suppl. 224.*]

NOTE.—For many years the Dr. Pierre Chemical Company has exploited Boro-Pheno-Form. From letters that have been received, it appears that this preparation has been used as a contraceptive. Chicago papers a number of years ago reported that Miss Fannie Brin and Miss Annie Masonick, proprietors of the Dr. Pierre Chemical Company, had pleaded guilty in the federal courts to sending prohibited drugs through the mails and were fined. In latter years the Dr. Pierre Chemical Company has exploited, in connection with its Boro-Pheno-Form, the "Pheno-Self-Dilating Syringe."

Whitlock's Specific.—The Cherokee Remedy Company of Chicago, Illinois, shipped, in October, 1925, a quantity of "Whitlock's Specific" which the federal authorities declared was misbranded. When analyzed by the Bureau of Chemistry, Whitlock's Specific was found to consist of approximately 99 per cent of water with small amounts of alum, sodium benzoate and extract of a plant drug. The curative claims made for Whitlock's Specific were false and fraudulent and, further, misled the purchaser to believe that it was a liquid food and made new blood. In July, 1926, J. T. Whitlock of Chicago petitioned for the return of the property, and, having undertaken to relabel the product and filed a bond to secure performance of the relabeling, the court ordered that this piece of quackery be released to the claimant.—[*Notice of Judgment 14549; issued January, 1927. Chem. Suppl. 221.*]

Tex Bailey's Nu-Life.—The Tex Bailey Corporation of Troy, N. Y., in March, 1926, shipped to Connecticut two consignments of "Tex Bailey's Nu-Life," which the federal authorities declared was misbranded. Some of the claims made for this nostrum were:

"Beneficial for Rheumatism, Neuralgia, Chills, Fever, Ague, La Grippe, Catarrh, Asthma, Skin Eruptions, Pimples, Boils, Eczema, Scrofulous Humors, Scald Head, Syphilitic Humors, Erysipelas. Bloating of the Stomach, Dizziness, Faintness, Nervous Headache, Female Weakness, Pains in the Back. Biliousness and any Bowel or Kidney Trouble."

It was also recommended for syphilis and gonorrheal rheumatism. When analyzed by the Bureau of Chemistry, it was found to consist essentially of a watery solution of epsom salt, iron chloride, salicylic acid, with red pepper and senna, flavored with sassafras and sweetened with saccharine. The government held that the claims made were false and fraudulent and, in August and September, 1926, judgment of condemnation and forfeiture was entered and the court ordered that the product be destroyed.—[*Notice of Judgment 14656 and 14678; issued March, 1927. Chem. Suppl. 224.*]

Correspondence

RADIUM IN EXOPHTHALMIC GOITER

To the Editor:—The answer to the recent inquiry regarding the merits of radium in the treatment of exophthalmic goiter and toxic goiter (THE JOURNAL, March 12, page 860) deserves comment. I refer in particular to the last sentence of the second paragraph: "Unless the disease has lasted too long, the patients are restored to complete health without any disability whatever, and in the hands of competent surgeons the mortality is extremely low."

The objection to this statement lies not so much in the statement itself as in the entirely erroneous implication it conveys of a complete cure by surgery. Aside from any discussion of the relative merits of the various methods of treatment, it is well known that any such sweeping conclusion would not be true.

There is, however, an even more fundamental objection to such statements. In view of the as yet unsolved nature of the disease, any premature and uncritical acceptance of any particular form of treatment as an entirely satisfactory and complete cure of the condition hampers the further study of the problem. It is the emphasis on the surgical phase of this disease, so well reflected in the statement quoted, with the consequent tendency to assume that the thyroid constitutes the sole seat and factor in this disease, which has done as much to hinder the further understanding and knowledge of its etiology and pathogenesis as any of the difficulties that hamper the solution of this difficult problem.

Incidentally there is, of course, no criticism of the statement regarding the surgical mortality.

JOHN B. YOUMANS, M.D., Ann Arbor, Mich.

HEALTH OF AMERICAN INDIANS

To the Editor:—We are replying to the editorial comment on this subject (THE JOURNAL, January 8, p. 104), and to the communication from Dr. Haven Emerson (THE JOURNAL, February 5, p. 424).

The Census Bureau figures for death rates among Indians as given by Dr. Emerson are:

1921	17.5	1923	22.5
1922	19.2	1924	25.9

The death rate per thousand in accordance with Indian Office figures are:

1921	22.3	1924	Data incomplete*
1922	25.1	1925	23.4
1923	21.8		

* Reference to field required to supply certain deficiencies.

The latter figures, instead of showing an increase of 48 per cent in the mortality rate among the Indians in the four years ending with 1924 as stated by Dr. Emerson, show an increase of 4.9 per cent for the five year period from 1921 to 1925, inclusive. It is thought that this apparent increase is due to the fact that with increased and improved medical, hospital and nursing service on Indian reservations there has been brought about a better reporting of birth and death data for this population.

It is true that the Census Bureau data are obtained largely through the Bureau of Indian Affairs. That is, reports of births and deaths collected on reservations under the jurisdiction of the Indian Bureau are forwarded to the Bureau of the Census through the Bureau of Indian Affairs. There are, however, a large number of Indians throughout the country for whom vital statistics are not gathered by the Indian Office, and for whom such data are collected by the Census Bureau. For example, in approximately twenty-five states there are groups of Indians varying from very few to almost 10,000 whose figures regarding population, births and deaths are secured by the Indian Office from the Census Bureau reports. The explanation is that these Indians are not wards of the Indian Bureau and the Indian Bureau does not collect data of this character from them. These groups of Indians will total almost 25,000. Vital statistics for the Five Civilized Tribes of Oklahoma comprising approximately 100,000 Indians are not collected by the Indian Bureau because these Indians are intermingled with the citizen population very largely and are not on reservations, nor are they collected by the Census Bureau except for such of these tribes as reside within Oklahoma City, the state of Oklahoma with the exception of Oklahoma City not being within the registration area. Thus, approximately one third of the Indian population of the country does not send data relating to births or deaths to the Indian Office, and probably only to a fragmentary degree to the Bureau of the Census.

The Census Bureau tables are made up of population estimates based on ten year enumerations. The Indian Bureau among its Indian wards attempts to have accurate census yearly. The foregoing factors are undoubtedly responsible for the variation in figures on births and deaths as reported by the Census Bureau and by the Indian Office. The chief statistician for vital statistics of the Bureau of the Census is in agreement with this statement.

The difference between the figures of the Census Bureau and of the Indian Office regarding death rates of Indians in particular states as referred to in Dr. Emerson's letter is:

	Census Bureau 1924	Census Bureau 1925	Indian Office 1925
Montana	34.5	23.8	20.4
North Dakota	24.9	18.8	22.9
Washington	34.5	17.1	17.1
Wyoming	86.1	32.7	23.2

In connection with infant mortality rates, the Census Bureau figures are for deaths under 1 year per thousand live births within the year. The Indian Office collects figures for the age

period under 3 years, and the death rates for this period are high.

The early life of Indians is a critical period on account of the insanitary conditions under which they live, their lack of protection during inclement and unseasonable weather, and the gross errors in feeding as carried out by mothers. To improve this situation calls for a very material increase in the number of public health nurses to work among the Indian homes throughout the reservations of the country. This work is planned for and is being extended as rapidly as funds will permit.

Regarding deaths from tuberculosis, the Indian Bureau records indicate that for this disease in 1923 the percentage was 21.4, and for 1925 was 25.9 of all deaths.

The reliability of death and birth statistics among the Indians as gathered by both the Bureau of the Census and the Indian Bureau is influenced materially by certain factors. Many Indians are reluctant to report births and deaths, and under some circumstances such data are not brought to light until a period of several years possibly has elapsed. The collection of these statistics is quite accurate in Indian hospitals, Indian schools (both reservation and nonreservation), and among the groups of Indians living in fairly close proximity to agency headquarters. On the reservations covering large geographic areas, and there are many of these, where the population is scattered and often constantly on the move, where many of these people do not speak English, and where there is a definite disposition to conceal facts relating to births and deaths, the difficulties attendant on the collection of reliable and accurate statistics may be readily appreciated.

I have not found in the Indian Office a desire to create the impression that existing administrative initiative is sufficing to deal with the grave health conditions existing among many of the Indians of this country. Tuberculosis and trachoma are known to be prevalent, and in certain sections of the country unusually high. The Indian Office is operating ninety-one hospitals, varying from six to eight bed school infirmaries to 120 bed sanatoriums for the treatment of tuberculosis. It has general hospitals on most of the reservations, some having no facilities whatever of this character. It has a number of sanatorium schools for the treatment of incipient tuberculosis among Indian children. It has a certain number of field matrons as well as field nurses who visit Indian homes. That these facilities need to be extended is beyond question, and efforts are being made to secure increased funds to provide facilities of this character on the Indian reservations where there are none at present. The public health nurse is replacing the field matron as rapidly as these changes can be brought about, and increased funds are being asked for to extend the field nursing service. Definite facts regarding health are incorporated in the curriculums of Indian Schools. The physician and the public health nurse must teach the basic facts in connection with disease prevention, of personal hygiene, and of sanitation to the adult Indians in their homes. The natural reluctance of these people to take on new ideas, and the influence of the still existing medicine man, must be overcome, and the results of public health education must be made effective, together with the building up of the economic status of the Indians, to improve materially the conditions responsible for the high rates among these primitive people.

For this work the Public Health Service has lent four of its officers, and districts have been established where these physicians are now acting as field directors. The field directors of the Public Health Service have also been made available to visit, inspect and recommend on medical activities of Indian reservations.

The stabilizing of the medical and nursing service of the Indian Bureau is of paramount importance in connection with the treatment and prevention of disease among this population, and the factors which influence this are now under consideration with a view to effecting improvement therein.

The problems relating to health and prevention of disease among Indians are enormous. To meet them will require not only improvements and expansion in the personnel and facilities of the Indian Bureau, but also the advice, cooperation and constructive criticism on the part of individuals and organizations qualified and interested in helping this work. To meet these various situations adequately, the advance must of necessity be slow and well thought out.

Finally, I should like to renew the invitation that has been extended to Dr. Emerson to visit the Indian Bureau for information regarding its medical problems, difficulties and plans for future work.

M. C. GUTHRIE, M.D., Washington, D. C.
Surgeon, U. S. Public Health Service;
Chief Medical Director, Bureau of
Indian Affairs.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

SULPHUR OINTMENT FOR SCABIES

To the Editor:—We have somewhat of an epidemic of scabies in the Indian school, especially among boys. Please let me know what in your judgment is the most effective treatment.

JAMES D. KENNEDY, M.D., Toadlena, N. M.

ANSWER.—This subject was discussed in Queries and Minor Notes under the heading "Sulphur Ointment for Scabies" in THE JOURNAL, March 5, page 746.

RICE RUPTURE CURE

To the Editor:—I have a patient with an umbilical hernia who has asked my opinion regarding "The Comfort Support," "Lymphol Stimulating Application" and "Osmolax," products of a William S. Rice, Inc., Adams, N. Y. I had never heard of any of those, and told the patient that quite presumably the whole thing was another fraud. Can you give me any information regarding these products?

GEORGE A. HOKE, M.D., Elyria, Ohio.

ANSWER.—William S. Rice, Inc., Adams, N. Y., sells what the public is led to believe is a cure for rupture. The concern sometimes advertises under its own name and address and sometimes under the name of a stool-pigeon, one Eugene M. Pullen, Manasquan, N. J. The Pullen advertisements state that he (Pullen) has nothing to sell "but will give full information about how you may find a complete cure without operation" if you will write to him. Those who write receive a letter printed, in facsimile of handwriting, urging the prospective victim to "lose no time in ordering the Rice Treatment." The Rice concern, in common with most mail-order "rupture cure" outfits, decries the use of the truss and gives the impression that what they have to sell is something entirely different—"perfected appliances," not trusses. The device is essentially a band of webbing with a pad and understrap. Like most mail-order "rupture cures," the Rice device has a "patent medicine" adjunct—"Developing Lymphol." It is claimed, either inferentially or directly, that Lymphol will repair the break in the abdominal wall and thus permanently cure the rupture. Lymphol, when analyzed by the chemists of the British Medical Association, was reported to be an alcoholic solution containing essential oils, capsicum and resin, colored red. During recent years, the Rice concern, in addition to its mail-order quackery, has sent around to some of the larger cities what they are pleased to call "special representatives" and "rupture experts." Those that are on the Rice "sucker list" are notified by mail when the Rice "experts" will be in their cities, and are sent

a gaudy red, green and yellow "Special Price Certificate," offering a rebate of $3. In its mail-order business, the Rice concern, as is usual in mail-order quackery, lowers the price if the victims do not bite readily. The essential facts just given are taken from the pamphlet "Mechanical Nostrums" (price 15 cents), one of a series prepared and issued by the Bureau of Investigation of the American Medical Association.

QUANTITATIVE DETERMINATION OF INDICAN IN BLOOD

To the Editor:—Can you direct me to the proper literature or authority wherein it would be possible to find a quantitative method for the determination of indican in the blood?

JULIUS FERBER, M.D., New York.

ANSWER.—Considerable discussion of indicanemia may be found in the German literature. The following papers might be mentioned:

Rosenberg, M.: *Arch. f. exper. Path. u. Pharmakol.* **86:** 15-48, 1920.
Klein, O.: *Ztschr. f. inn. Med.* **46:** 1137-1163 (Nov. 28) 1925; *Med. Klin.* **21:** 816-819 (May 29) 1925.
Baar, G.: *Wien. Arch. f. inn. Med.* **5:** 353-356 (Jan. 23) 1923; *M. J. & Record* **121:** 677-679 (June 3) 1925.

Baar also has a book with the title "Das Indicanemie." In the paper in the *Medical Journal and Record*, Baar gives a simple technic of estimating indican in blood serum, together with a brief discussion of indicanemia.

RAYNAUD'S DISEASE

To the Editor:—Please indicate what mental symptoms may be caused by Raynaud's disease and a prognosis for these. Would abnormal blood pressure, either hypertension or hypotension, incline to affect the symptoms of this disease in connection with either the extremities or the mental processes? Is there virtue in exercise in relation to this disease; if so, what types of exercises? Please omit name.

M.D., Illinois.

ANSWER.—Mental symptoms in Raynaud's disease may be associated with the extreme pain of attacks of local syncope, the generalized toxemia resulting from a gangrenous part, or the realization of the chronicity and incurability of the disease. These factors result in mental reactions not at all specific to the disease and cause irritability as in most painful conditions, delirium, excited or confusional states as in other toxemias, and depression as in other chronic diseases.

It cannot be definitely stated that mental symptoms are part of Raynaud's disease. Cassirer, however, quotes Monro as finding mental symptoms associated in 4.5 per cent of cases. Stanley has observed mental deficiency with Raynaud's disease and certain degenerative signs. Acute mania, simple dementia, melancholia, catatonia and other psychoses have been described by Bland, Macpherson, Ritti and others.

Abnormal blood pressures probably do not affect the local symptoms of so-called true Raynaud's disease. However, the syndrome of Raynaud may result from definite central or peripheral nervous or vascular organic lesions, and that type of local syncope associated with vascular disease is probably influenced by the physiologic state of the vessels, one evidence of which may be an abnormal blood pressure. Mental symptoms themselves may be also the result of the same vascular disease as producing the Raynaud syndrome.

Exercise probably does not affect the course of the disease. in this as in other vasomotor neuroses, blood vessel exercise, such as alternating heat and cold stimulation, may be beneficial.

TRANSMISSION OF SYPHILIS

To the Editor:—1. What is the latest teaching as to whether a husband with syphilis, 4 plus, can cohabit with a wife and not infect her? 2. Is it possible for a baby to have syphilis inherited from the father, the mother never having had it? 3. Is it possible for a mother who has syphilis to give birth to a baby free from the disease? 4. What is the latest approved treatment for a syphilitic new-born baby? Has the treatment by arsphenamine put up in capsules for inserting in the rectum proved of real merit? Please use initials only.

M.D., Alaska.

ANSWER.—1. A husband with a 4 plus Wassermann reaction may or may not be able to infect his wife by cohabitation. If his syphilis is of recent origin, if he has been inadequately treated and has fresh or recurring lesions of the skin and mucous membranes, the chances of the wife's escaping infection are small, provided contraceptive measures are not used. On the other hand, if he has had syphilis for many years and there are no symptoms or signs except the positive Wassermann reaction, the probability is that he will not infect her. The principal danger is within the first five years of the disease, and much depends on how thoroughly treatment has been carried out in the early stages. A man with tabes or aortic syphilis of many years' duration may safely be considered noninfective in spite of a positive blood test. The presence or absence of spirochetes in the seminal fluid, as pointed out by Eberson, is an important criterion of infectivity.

2. According to Hochsinger of Vienna and other authorities, paternal transmission of syphilis does occur. In a small percentage of cases the new-born child will have symptoms of heredosyphilis without the mother having clinical or serologic evidence of the disease.

3. It is by no means uncommon for a mother who has syphilis to give birth to an apparently healthy baby, especially if the mother has received treatment during her pregnancy or if she has had the disease for a number of years. The apparently healthy child of a syphilitic mother must, however, be watched for many years for evidence of late or tardy hereditary syphilis.

4. One of the latest approved methods of treating a new-born congenital syphilitic baby is that suggested by Fordyce and Rosen. Treatment should begin with a course of eight weekly neoarsphenamine injections intramuscularly, in doses of from 0.05 to 0.1 Gm. and should be followed by ten or twelve intramuscular injections of mercuric chloride in oil. Another excellent method of treatment is by intramuscular sulpharsphenamine in doses of 0.1 Gm., followed by mercurial inunctions or mercury with chalk by mouth. The rectal administration of arsphenamine is not approved by reputable syphilologists on account of the uncertainty of absorption by this route.

RECTAL ANESTHESIA IN OBSTETRICS

To the Editor:—Kindly advise me as to the value of rectal anesthesia in labor cases; also as to the synergistic action of magnesium sulphate with the rectal anesthesia. Please tell me of any valuable literature that I could look up on the subject.

RAUL PIETRI, M.D., New York.

ANSWER.—The Gwathmey method of producing painless childbirth consists of the hypodermic administration of morphine and magnesium sulphate, and the rectal instillation of ether, alcohol, quinine and oil. This combination produces analgesia and not anesthesia, as suggested in the query. It has been found by some that in the majority of cases the use of morphine and magnesium sulphate alone without rectal instillation yields the desired effect; namely, a relatively painless labor. In a definite proportion of women, however, the rectal instillation must be added to the hypodermic injections before analgesia results. In the following references the technic and results are given:

Gwathmey, J. T., and others: Painless Childbirth by Synergistic Methods, *Am. J. Obst. & Gynec.* **6:** 456 (Oct.) 1923.
Gwathmey, J. T., and others: Painless Childbirth by Synergistic Methods; second paper, *Am. J. Obst. & Gynec.* **8:** 154 (Aug.) 1924.
Davis, A. B.: Amelioration of Labor Pains by Morphine, Magnesium Sulphate Injections and Colonic Ether Instillation, *Surg. Gynec. Obst.* **40:** 868 (June) 1925.

NEURITIS AFTER PARTURITION

To the Editor—I have a case of severe neuritis of the right sciatic nerve which developed in a 9 pound baby the following days after a difficult forceps delivery. In my long obstetric experience I never experienced such an incident, nor do I know of such a possible complication theoretically. There has not been improvement now five weeks after delivery, in spite of salicylates, heat and diathermy. There is not a sign of phlebitis nor any infiltration of the parametrium. I wonder if there is a possible injury of the sacral plexus by the forceps. May I have your opinion about it? Please omit my name.

M.D., New York.

ANSWER.—There is no doubt that forceps may occasionally injure nerves in the pelvis, among them the sciatic nerve. The injury may result in either transitory or permanent paralysis, and in atrophy of some of the muscles of the involved leg. Usually, however, the prognosis is good, although months may elapse before the effects of the neuritis disappear. Electrical stimulation often proves helpful.

RECURRING ULCERS OF THE MOUTH

To the Editor:—In THE JOURNAL, March 19, page 946, there is a query about recurring ulcers of the mouth. In the reply, the editor failed to state that one of the most common causes of recurring ulcers of the mouth undoubtedly lies in the ingestion of drugs. In the order of frequency, these are: (1) phenolphthalein, (2) luminal (phenobarbital), (3) acetphenetidin and (4) antipyrine.

FRED WISE, M.D., New York.

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

AMERICAN BOARD FOR OPHTHALMIC EXAMINATIONS: Washington, D. C., May 17. Sec., Dr. William H. Wilder, 122 So. Michigan Blvd. Chicago.

ARKANSAS: Regular Board, Little Rock, May 10-11. Sec., Dr. J. W. Walker, Fayetteville. Homeopathic Board: Little Rock, May 10. Sec., Dr. Allison A. Pringle, Eureka Springs.

CALIFORNIA: Los Angeles, May 16-19. Sec., Dr. Charles B. Pinkham, 908 Forum Bldg., Sacramento.

DISTRICT OF COLUMBIA: April 12. Sec., Dr. Edgar P. Copeland, 1801 Eye St., Washington.

NEVADA: Carson City, May 1. Acting Sec., Dr. Edward E. Hamer, Carson City.

NEW MEXICO: Santa Fe, April 11-12. Sec., Dr. W. T. Joyner, Roswell.

WASHINGTON: Seattle, April 11. Reciprocity meeting only. Asst. Director of Licenses, Mr. George L. Berger, Olympia.

New York September Examination

Mr. Herbert J. Hamilton, chief of the professional examinations bureau of the New York Department of Education, reports the written examination held at Albany, Buffalo, New York and Syracuse, Sept. 20-23, 1926. The examination covered 8 subjects and included 80 questions. An average of 75 per cent was required to pass. Of the 204 candidates examined, 162, including 5 osteopaths, passed and 42, including 4 osteopaths, failed. Thirty-two candidates, including 1 osteopath, were licensed by endorsement of their credentials. The following colleges were represented:

College	PASSED Year Grad.	Number Passed
Yale Univ. Sch. of Med.	(1921), (1924, 2), (1925, 2), (1926)	6
Georgetown University School of Medicine	(1926)	6
George Washington University Med. School	(1925), (1926, 5)	6
Howard University School of Medicine	(1925), (1926, 4)	5
University of Georgia Medical Department	(1926)	1
Northwestern University Medical School	(1926)	1
Rush Medical College	(1926)	1
University of Illinois College of Medicine	(1926)	1
John's Hopkins University Med. Dept.	(1919), (1922), (1924)	3
University of Maryland School of Medicine	(1926)	5
Boston University School of Medicine	(1925), (1926, 3)	4
Harvard University	(1925)	1
Tufts College Med. School	(1921), (1924), (1925, 2), (1926, 5)	9
Detroit College of Medicine and Surgery	(1924)	1
University of Michigan Medical School	(1923), (1926, 2)	3
St. Louis University School of Medicine	(1926)	1
Creighton University College of Medicine	(1926)	1
University of Nebraska College of Medicine	(1925)	1
Albany Medical College	(1926)	1
Columbia University College of Phys. and Surgs.	(1926)	6
Cornell University Medical College	(1917), (1925), (1926, 4)	6
Long Island College Hospital	(1912), (1926, 5)	6
New York Homeopathic Med. Coll. and Flower Hosp.	(1926)	2
University and Bellevue Hospital Medical College	(1926)	3
Eclectic Medical College, Cincinnati	(1925), (1926, 5)	6
University of Oklahoma School of Medicine	(1926)	2
Hahnemann Medical Coll. and Hosp. of Philadelphia	(1926)	2
Jefferson Medical College of Philadelphia	(1925, 2), (1926, 2)	4
Univ. of Pennsylvania School of Med.	(1921), (1925), (1926)	3
University of Pittsburgh School of Medicine	(1924)	1
Women's Medical College of Pennsylvania	(1925), (1926)	2
Medical College of the State of South Carolina	(1925)	1
University of Tennessee College of Medicine	(1925), (1926)	2
Vanderbilt University School of Medicine	(1926)	1
Baylor University College of Medicine	(1926)	1
University of Texas Dept. of Med.	(1923), (1924), (1926, 2)	4
University of Vermont College of Medicine	(1925)	1
University of Alberta Faculty of Medicine	(1925)	2
Queen's University Faculty of Med.	(1913), (1924), (1926,2)	4
University of Toronto Faculty of Medicine	(1920), (1922), (1923), (1924, 2), (1925, 3), (1926, 2)	10
McGill University Faculty of Med.	(1922), (1923), (1926, 5)	7
University of Vienna, Austria	(1915),* (1921, 2),* (1923)*	4
Comenian University of Bratislava, Czechoslovakia	(1923)*	1
German University of Prague, Czechoslovakia	(1924)*	1
University of Montpellier, France	(1913)	1
University of Bonn, Germany	(1922)	1
University of Giessen, Germany	(1923)	1
University of Tübingen, Germany	(1920)*	1
National University of Athens, Greece	(1921)*	1
University of Budapest, Hungary	(1921),* (1923)*	2
University of Naples, Italy	(1916)*	1
University of Rome, Italy	(1921)*	1
University of Cluj, Roumania	(1923)	1
University of Kazan, Russia	(1919)	1
University of Odessa, Russia	(1918)*	1
University of Petrograd, Russia	(1912)*	1
University of Saratov, Russia	(1919)*	1
University of Berne, Switzerland	(1912)	1
University of Zurich, Switzerland	(1922)	1
University of St. Joseph, Beirut, Syria	(1912)*	1
University of Constantinople, Turkey	(1917)	1
Osteopaths		5

College	FAILED Year Grad.	Number Failed
Howard University School of Medicine	(1925, 3), (1926, 3)	6
Tufts College Medical School	(1924)	1
University of Nebraska College of Medicine	(1925)	1
University of Buffalo Department of Medicine	(1926)	1
New York Homeopathic Med. Coll. and Flower Hosp.	(1920)	1
Women's Medical College of Pennsylvania	(1925)	2
Vanderbilt University School of Medicine	(1925)	1
Baylor University College of Medicine	(1921)	1
University of Vermont College of Medicine	(1926)	1
University of Toronto Faculty of Medicine	(1922)	1
University of Havana, Cuba	(1921)*	1
Comenian University of Bratislava, Czechoslovakia	(1920)*	1
University of Toulouse, France	(1922)	1
University of Kiel, Germany	(1917)	1
University of Munich, Germany	(1925)*	1
University of Athens, Greece	(1916),* (1922)	2
University of Szegedin, Hungary	(1922)*	1
University of Messina, Italy	(1923)*	1
University of Naples, Italy	(1900),* (1907),* (1920),* (1921),* (1923, 4),* (1924)*	9
University of Palermo, Italy	(1922)*	1
University of Rome, Italy	(1920)*	1
University of Cluj, Roumania	(1921)*	1
University of Geneva, Switzerland	(1917)*	1
Osteopaths		4

College	ENDORSEMENT OF CREDENTIALS Year Grad.	Endorsement with
University of Colorado School of Medicine	(1912)	Colorado
Yale University School of Medicine	(1915)	Connecticut
Georgetown University School of Medicine	(1924)	New Jersey
Howard University School of Medicine	(1907)	W. Virginia
University of Maryland School of Medicine	(1919)	Maryland
Boston University School of Medicine	(1896), (1904)	Mass.
Harvard University	(1917)	Ohio
Tufts College Medical School	(1913), (1919)	Mass.
University of Michigan Medical School	(1914), (1917)	Michigan
Columbia University College of Phys. and Surgs.	(1914)	Connecticut
University and Bellevue Hospital Medical College	(1913)	New Jersey
University of North Carolina School of Medicine		Mass.
Jefferson Medical College of Philadelphia	(1911)	Penna.
University of Pennsylvania School of Medicine	(1898)	Mass.
Medical College of Virginia	(1925)	Virginia
University of Virginia Department of Medicine	(1899)	Virginia
Licentiate of the Royal College of Physicians, London, England	(1915)	Mass.
University of Breslau, Germany	(1911)	Hawaii
University of Zurich, Switzerland	(1917)	Dist. Colum.
Osteopath		New Jersey

College	ENDORSEMENT OF GOVERNMENT CREDENTIALS Year Grad.	Endorsement with
University of Michigan Medical School	(1925)	N. B. M. Ex.
Cornell University College of Medicine	(1924), (1925)	N. B. M. Ex.
Syracuse University College of Medicine	(1924)	N. B. M. Ex.
Women's Medical College of Pennsylvania	(1923)	N. B. M. Ex.
University of Budapest, Hungary	(1917)*	N. B. M. Ex.

College	ENDORSEMENT OF DIPLOMA Year Grad.
Missouri Medical College	(1882)
Medico-Chirurgical College of Philadelphia	(1909)†
University of Vienna, Austria	(1914)

* Verification of graduation in process.
† Granted license without examination because of years of practice.

Virginia December Examination

Dr. J W. Preston, secretary of the Virginia State Board of Medical Examiners, reports the written examination held in Richmond, Dec. 7-10, 1926. The examination covered 8 subjects and included 80 questions. An average of 75 per cent was required to pass. Twelve candidates were examined, all of whom passed. Twelve candidates were licensed by reciprocity and 3 by endorsement of their credentials. The following colleges were represented:

College	PASSED Year Grad.	Per Cent
Howard University School of Medicine	(1926)	80, 85
College of Physicians and Surgeons, Baltimore	(1914)	75
University of Minnesota Medical School	(1926)	91
Columbia University College of Phys. and Surgeons	(1926)	88
Meharry Medical College	(1926)	75
Medical College of Virginia	(1926)	88
Univ. of Virginia School of Med.	(1925) 87, (1926) 87, 87, 89, 92	

College	LICENSED BY RECIPROCITY Year Grad.	Reciprocity with
Georgetown University School of Medicine	(1921), (1923)	Dist. Colum.
George Washington University Medical School	(1924)	Dist. Colum.
Howard University School of Medicine	(1925)	Dist. Colum.
Johns Hopkins University Medical Department	(1922)	Maryland
University of Maryland School of Medicine	(1898)	W. Virginia
University of Oklahoma School of Medicine	(1925)	Oklahoma
University of Pennsylvania School of Medicine	(1924)	N. Carolina
Lincoln Memorial University	(1910)	Tennessee
Meharry Medical College	(1923)	Tennessee
Medical College of Virginia	(1917)	N. Carolina
University of Virginia School of Medicine	(1925)	N. Carolina

College	ENDORSEMENT OF CREDENTIALS Year Grad.	Endorsement with
University of Virginia School of Medicine (1924, 2), (1925)	(1924)	U. S. Navy N. B. M. Ex.

Book Notices

A SOUND ECONOMIC BASIS FOR SCHOOLS OF NURSING, AND OTHER ADDRESSES. By Mary Adelaide Nutting, R.N., M.A. Cloth. Price, $2.50. Pp. 327. New York: G. P. Putnam's Sons, 1926.

The author has been one of the leaders in nursing education for thirty years. In this book she has collected a large number of occasional addresses which she has delivered during her career. The titles of the various addresses indicate the character of the contents. Among these are: A Sound Economic Basis for Schools of Nursing, Suggestions for Educational Standards, Preliminary Education, Nursing and Its Opportunities, Ideals for Schools of Nursing, Twenty Years of Nursing Education in Teachers' College and the Outlook in Nursing. Many of these addresses were delivered nearly twenty-five years ago, but they consider problems that are still alive and interesting in nursing. Such a collection of addresses, however, necessarily involves a great deal of repetition, and the book would have been more useful if it had been carefully edited in order to make it more consecutive and less repetitious. The tone of the book is expressed in "ideals for schools of nursing." With high ambitions for nursing as a profession, and with a background of broad education, the author is interested in the production of the most scholarly type of nurse. She bewails throughout the work the lack of facilities for academic education in the nurse's training, the failure of endowments for schools of nursing and for those things that would produce nurses of academic distinction. She is interested, in short, in the product itself and not in its practical usefulness. Of course, some of her type of nurses are needed for headships in hospitals, for superintendents of public health nursing work and that sort of thing, but where one such nurse is needed probably fifty more are needed for the homely duty of acting as helpers for the sick under the physician's guidance. There is no indication of any anxiety about the production of the latter sort of nurse in the book. There is need for blunt consideration of this unpleasant topic. Nurses are not physicians; except when they are outside of work which in the strict sense of the word is nursing the sick, they are not in a position of independent responsibility. In no offensive sense, most of them should be servants for the sick. There is little evidence in nursing literature of a willingness to face this fact. It is resulting in a failure of the nursing vocation to meet face to face its largest and most useful function.

UEBER FORTSCHRITTE IN DER BEHANDLUNG DES KREBSES. Von Erich Opitz, K. Vorlaender, und H. Jung. Paper. Price, 2 marks. Pp. 60, with 20 illustrations. Munich: J. F. Lehmanns, 1926.

The author discusses progress in the treatment of cancer, disclaiming the justification of extreme pessimism in judging the remote results of cancer therapy. He expresses the conviction that the body contains defensive forces which occasionally are strong enough to overcome not only solitary cancers but also metastases. The future of successful therapy lies in the endeavor to utilize and reenforce these natural defensive forces. For his experimental studies he used cancers produced by inoculation because epithelioma following consistent tar irritation did not show satisfactory uniformity. While it is admitted that the results of observation and treatment in animals cannot indiscriminately be applied to cancer in man, still in the later stages the cancerous conditions in animals become practically identical with those to be found in spontaneous cancers in the human being. The efficacy of radiotherapy is not exhausted by the direct action on malignant cells but also produces changes in the adjacent areas and in the general metabolism. The author is inclined to believe that these secondary changes are of signal value for the therapeutic results. All these observations permit the suggestion that cancer is the local expression of a general disturbance, of which acidosis and lack of proper oxidation are prominent features. The author's idea is not to fight the cancer cells but the disease of cancer. He advocates the establishment of cancer sanatoriums in order to control systematically the treatment of the patients, their metabolic changes and the necessary variations of the diet. It is asserted that positive results were obtained by the injection of certain materials combined with radiotherapy. Unfortunately, the exact chemical composition of these materials is not communicated to the profession. They are introduced by proprietary names only, though the manufacturing firm is mentioned. The second part of the pamphlet is devoted to reports on the animal experiments conducted along the lines indicated.

VORLESUNGEN ÜBER HISTO-BIOLOGIE DER MENSCHLICHEN HAUT UND IHRER ERKRANKUNGEN. Band II. Von Dr. Josef Kyrle, Weiland a. o. Professor für Dermatologie und Syphilis an der Universität in Wien. Paper. Price, 42 marks. Pp. 287, with 176 illustrations. Berlin: Julius Springer, 1927.

The second volume of Kyrle's Histobiology of the Skin sustains the excellent impression left by the first volume. The colored illustrations made from original histologic preparations are models of clarity and detail. Included in this volume are the acute and chronic inflammatory disorders of the skin and the so-called specific granulomas. The chapters on the various forms of tuberculosis of the skin, on syphilis, on leprosy and on lymphogranulomatosis are of especial interest. Kyrle's original plan to include the tumors of the skin in this volume was prevented by illness, and it was his intention to cover this subject in a third volume. The untimely death of the author occurred in March, 1926, and the present two volumes will remain as a lasting monument to the zeal and industry of this talented dermatologist.

Books Received

Books received are acknowledged in this column, and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for more extensive review in the interests of our readers and as space permits. Books listed in this department are not available for lending. Any information concerning them will be supplied on request.

THE NATURAL HISTORY OF OUR CONDUCT. By William E. Ritter, President of Science Service. With the Collaboration of Edna Watson Bailey, Lecturer in Education & Association Director of Practice Teaching, University of California. Cloth. Price, $3.50. Pp. 339. New York: Harcourt, Brace & Company, 1927.

Human behavior analyzed from the point of view of comparative psychology.

THE ELEMENTS OF MEDICAL TREATMENT. By Robert Hutchison, M.D., F.R.C.P., Physician to the London Hospital and to the Hospital for Sick Children. Cloth. Price, $3. Pp. 163. New York: William Wood & Company, 1926.

A handy compend with a collection of favorite prescriptions.

A MANUAL IN PRELIMINARY DIETETICS. By Maude A. Perry, B.Sc., Director of Dietetics, The Montreal General Hospital, Montreal, Canada. Cloth. Price, $1.25. Pp. 146. St. Louis: C. V. Mosby Company, 1926.

Fifteen elementary lessons for nurses, poorly printed but simple and sound.

HOSPITAL HOUSEKEEPING AND SANITATION. By Nora P. Hurst, R.N. Cloth. Price, $1.25. Pp. 155. St. Louis: C. V. Mosby Company, 1926.

Notes on keeping the hospital clean, with lots of blank pages—no doubt for memorandums.

DAS STRAHLUNGSKLIMA VON AROSA. Von Dr. F. W. Paul Götz, lichtklimatisches Observatorium Arosa. Paper. Price, 8.70 marks. Pp. 110, with 100 illustrations. Berlin: Julius Springer, 1926.

AMERICAN HEALTH CONGRESS. ATLANTIC CITY, NEW JERSEY, MAY 17-22, 1926. Proceedings of the general sessions with an index of the published papers. Paper. Pp. 105. New York, 1926.

TWENTY-NINTH BIENNIAL REPORT OF THE STATE BOARD OF HEALTH OF CALIFORNIA FOR THE FISCAL YEARS FROM JULY 1, 1924, TO JUNE 30, 1926. Paper. Pp. 197. Sacramento, 1926.

PROCEEDINGS OF THE FIFTH ANNUAL CONFERENCE OF THE HOSPITAL ASSOCIATION OF PENNSYLVANIA, APRIL 13th, 14th and 15th, 1926. Paper. Pp. 179. Pittsburgh, 1926.

SIXTY-NINTH ANNUAL REPORT OF THE WASHINGTONIAN HOME FOR THE YEAR ENDING DECEMBER 31, 1926. Paper. Pp. 19. Washington, 1927.

Medicolegal

Skill and Learning Requisites—May Infer Negligence

(Seewald v. Gentry (Mo.), 286 S. W. R. 445)

The Springfield (Mo.) Court of Appeals, in reversing a judgment for $1,500 damages for alleged malpractice that was rendered for the plaintiff, says that a physician or surgeon undertaking the treatment of a patient is not required to possess or exercise the greatest learning or the highest degree of skill. He is required only to possess and exercise that degree of skill and learning ordinarily possessed and exercised by the members of his profession in good standing, and it is his duty to use reasonable care and diligence in the exercise of his skill and the application of his learning, and to act according to his best judgment.

The plaintiff, a man, aged 59, had his right leg broken, between the knee and thigh. In the course of treatment by the defendant, three areas of dry gangrene developed—one just above the calf of the leg, one just above the heel, and one on the instep. But however severe the plaintiff's pain and suffering, and however deformed and useless his foot might be, he could not recover damages unless the defendant breached a duty that he owed him. The fact was incontroversible that long continued pressure would have produced the gangrene which developed on the plaintiff's foot, and it did not require expert evidence to establish the fact that the effect of that pressure might have been to some extent relieved by the use of padding. It seems clear to the court that on the issue of sufficient or suitable padding or bandage, the plaintiff was entitled to go to the jury.

The following instruction was given for the plaintiff: "The court instructs the jury that proof of negligence need not be by direct testimony, but may be inferred by the jury from all the facts and circumstances in evidence in the case." The defendant vigorously contended that this instruction was the height of error in a malpractice case. The argument presented against this instruction was founded on the theory that in a malpractice case against a physician, negligence can only be shown by the evidence of expert witnesses. But such an instruction is common in negligence cases generally, and to rule that this frequently used instruction does not have a place in a malpractice case would be a long step toward the adoption of the contention made by the defendant that the negligence of a physician can be established only by the evidence of experts.

When Disease Results Proximately from Accident

(New River Coal Co. v. Files (Ala.), 109 So. R. 360)

The Supreme Court of Alabama, in affirming a judgment for plaintiff Files under the workman's compensation law of that state, says that the law provides that "personal injuries . . . shall not include a disease unless the disease results proximately from the accident." The evidence for the plaintiff tended to show that while engaged in coal mining he was overcome and for a time rendered unconscious from breathing carbon dioxide or carbon monoxide, or both; that the bad air was due to insufficient ventilation; that the immediate cause of his suffocation was a current of such air passing through an opening he was making into a room where other workmen had been shooting, the gases from the shots not having disappeared. This court does not have any difficulty in holding that whatever injury and disability resulted proximately from this event was due to accident within the meaning of the compensation law. Whether his suffocation resulted from breathing such air for several hours, or the inflowing air from the other room for a few minutes, the event happened suddenly and violently, as contradistinguished from occupational disease. Taking this evidence as true, the injury was referable to a definite time, place and circumstances.

A disease "results proximately from the accident" if the disease is induced by lowered resistance proximately caused by the accident, or if it is aggravated or accelerated by the accident so that the disabling injury results proximately from the accident, and would not have developed but for the accident. The benefits of the workmen's compensation law are not limited to those in perfect health. The test is: Was the accident a proximate contributing cause acting on the particular individual to produce the disability to work, whether directly or through disease?

That the employee was in apparent good health, able to work regularly; that from and after the accident he was unable to work, had symptoms of heart weakness; that disability from abnormal heart condition appeared on examination at the time of the trial, furnished some evidence of causal connection between the accident and the disability. Giving full effect to the opinion evidence that persons in good health quickly and fully revive from the effects of carbon dioxide without lasting injury, this must be viewed in the light of all the evidence. It could not be said with certainty that carbon dioxide alone caused the suffocation.

Conviction on Proof of Treatment of Single Patient

(People v. T. Wah Hing (Calif.), 249 Pac. R. 229)

The District Court of Appeal of California, third district, in affirming a judgment of conviction of the defendant, says that the indictment charged that he, on the —— day of July, 1925, "did then and there wilfully and unlawfully practice, attempt to practice, and hold himself out as practicing a system or mode of treating the sick and afflicted in this state, without having at the time of so doing a valid, unrevoked certificate from the board of medical examiners of the state of California." The question was whether the facts and circumstances given in evidence were sufficient to warrant the inference that the defendant was engaged in the practice of medicine as a business. It was true that witnesses did not testify that the defendant ever treated any patient other than a Mrs. McBride, although he treated her on several different days; but it did not necessarily follow that the proof was insufficient. Proof of treatment of a single patient, together with evidence of surrounding facts and circumstances, may clearly show that a defendant was engaged in the practice of medicine as a business. The circumstances surrounding a single treatment of a patient may be such as to warrant the inference that the single treatment was part of the practice of medicine as a business by a defendant. Here the defendant was addressed as "Dr. Hing," and when asked if he was "Dr. Hing" he replied in the affirmative. He responded to several calls to attend Mrs. McBride, and proceeded to diagnose her case and prescribe medicines of his own selection. He maintained an office, the character of which did not appear from the evidence, and, the next day after his indictment, he said to another sick woman who stated her condition and asked for medicine, "I will fix you up." He was not on trial, of course, for anything that he did on the day of his arrest, but the evidence thereof was admissible as tending to prove that he was practicing medicine as a business in his treatment of Mrs. McBride, and not merely giving incidental treatment to a sick or afflicted person.

The trial court instructed the jury, among other things, that:

> If a patient states his or her ailments and describes his or her symptoms, and asks the defendant to supply herbs or medicines which would effect a cure, and if the defendant thereupon prepared and delivered herbs or medicines of his selection, such selection and delivery under such circumstances would constitute a violation on the part of the person so furnishing such herbs or medicines of section 17 of the medical practice act under which this prosecution is made.

The defendant contended that while these instructions "might have been relevant to a charge of 'diagnosing, prescribing or treating,' etc.," they were not applicable to the charge set out in the indictment. "Diagnosing, prescribing and treating," however, are constituent parts of the practice of medicine, and it was proper to instruct the jury in relation thereto. If the instructions stood alone, they might imply that the jury was authorized to convict the defendant

of offenses not charged in the indictment; but the court read the indictment to the jury and gave the following instruction:

You are instructed that to practice means that he was engaged in that line of work as a business, holding himself out as being so engaged, and that in order to convict the defendant in this case of practicing, or attempting to practice, or holding himself out as practicing, a system or mode of treating the sick and afflicted in this state, without having at the time of so doing a valid unrevoked certificate from the board of medical examiners of the state of California, you must find from the evidence to a moral certainty and beyond all reasonable doubt that he was practicing, attempting to practice, or holding himself out as practicing, a system or mode of treating the sick and afflicted as his business, and that unless you do so find beyond all reasonable doubt and to a moral certainty, your duty is to find the defendant not guilty.

In view of this plain and accurate instruction it is highly improbable that the jury could have been misled by the instructions of which complaint was made.

Medical and Surgical Aids Are "Compensation"

(Melcher's Case (Me.), 134 Atl. R. 542)

The Supreme Judicial Court of Maine, in affirming a decree dismissing a petition for the determination of a sum to be paid by the petitioner's employer to defray the expense of medical and surgical aid incurred immediately after the accident by which the plaintiff as an employee was injured, says that after compensation had been paid for more than six months, but before the petitioner had paid the physician who had administered to her during convalescence, she filed a request for commutation of future payments to a lump sum, which was ascertained and paid. Then, within sixty days of the receipt of the lump sum settlement, she filed the petition in question. Her employer, through its insurance carrier, disputed her right to further consideration as an injured employee, on the ground that a lump sum settlement was a full and final adjustment, and that payment thereof discharged the employer from any liability to the employee after the date of such payment. But the petitioner argued that medical aid and assistance is not "compensation," as the word is used in the section of the Maine workmen's compensation act, which provides that the employee accepting a lump sum settlement shall not receive future compensation under the provisions of this act; and that the expense incurred for such aid and assistance was still recoverable on petition. However, the wording of the phrase under inspection is entirely unambiguous, and its meaning must be held to be that, after paying the amount of the settlement ordered by the commission, the employer shall not be called on for further or other payments. As to the contention of the petitioner, this court cannot agree that the services of a physician or surgeon and medical and surgical aids are not "compensation" as intended by the legislature. In other words, the court holds that the services, restoratives and aids required by statute to be supplied are "compensation," within the meaning of workmen's compensation act; and that, after payment to him under a lump sum settlement order, regularly arrived at, the injured workman cannot longer, as of right, demand of the employer any contribution of any sort.

Society Proceedings

COMING MEETINGS

American Medical Association, Washington, D. C., May 16-20. Dr. Olin West, 535 North Dearborn Street, Chicago, Secretary.

Alabama, Medical Association of the State of, Montgomery, April 19-22. Dr. D. L. Cannon, 519 Dexter Ave., Montgomery, Assistant Secretary.

American Association for Thoracic Surgery, New York, May 9-11. Dr. Ethan Flagg Butler, Robert Packer Hospital, Sayre, Pa., Secretary.

American Association of Anatomists, Nashville, Tenn., April 14-16. Dr. L. H. Weed, Johns Hopkins Medical School, Baltimore, Secretary.

American Association of Genito-Urinary Surgeons, Absecon, N. J., May 9-11. Dr. W. C. Quinby, Peter Bent Brigham Hospital, Boston, Sec'y.

American Association of Pathologists and Bacteriologists, Rochester, N. Y., April 15-16. Dr. H. T. Karsner, School of Medicine, Western Reserve University, Cleveland, Secretary.

American Bronchoscopic Society, Atlantic City, May 21. Dr. H. B. Orton, 24 Commerce Street, Newark, N. J., Secretary.

American Child Health Association, Washington, D. C., May 9-11. Dr. Philip Van Ingen, 125 East 71st Street, New York, Secretary.

American Climatological and Clinical Association, White Sulphur Springs, W. Va., May 23-27. Dr. A. K. Stone, Auburn Street, Framingham Center, Mass., Secretary.

American Gastro-Enterological Association, Atlantic City, May 2-3. Dr. John Bryant, 338 Marlborough Street, Boston, Secretary.

American Gynecological Society, Hot Springs, Virginia, May 23-25. Dr. F. E. Keene, Medical Arts Building, Philadelphia, Secretary.

American Laryngological Association, Atlantic City, May 23-25. Dr. G. M. Coates, 1721 Pine Street, Philadelphia, Secretary.

American Laryngological, Rhinological and Otological Society, Atlantic City, May 26-28. Dr. R. L. Loughran, 33 East 63d Street, New York, Secretary.

American Neurological Association, Atlantic City, May 24-26. Dr. H. A. Riley, 870 Madison Avenue, New York, Secretary.

American Pharmacological Society, Rochester, N. Y., April 14-17. Dr. E. D. Brown, University of Minnesota, Minneapolis, Secretary.

American Physiological Society, Rochester, N. Y., April 14-16. Dr. W. J. Meek, University of Wisconsin, Madison, Secretary.

American Proctologic Society, Philadelphia, May 12-14. Dr. Louis A. Buie, Mayo Clinic, Rochester, Minn., Secretary.

American Psychiatric Association, Cincinnati, May 31. Dr. E. D. Bond, 4401 Market Street, Philadelphia, Secretary.

American Psychopathological Association, Cincinnati, June 3. Dr. M. W. Peet, 520 Commonwealth Avenue, Boston, Secretary.

American Radium Society, Washington, D. C., May 16-17. Dr. E. C. Ernst, 412 Humboldt Building, St. Louis, Secretary.

American Society for Experimental Pathology, Rochester, N. Y., April 14-16. Dr. E. B. Krumbhaar, Philadelphia General Hospital, Philadelphia, Secretary.

American Society of Biological Chemistry, Rochester, N. Y., April 14-16. Dr. F. C. Koch, University of Chicago, Chicago, Secretary.

American Society of Clinical Investigation, Atlantic City, May 2. Dr. J. T. Wearn, Boston City Hospital, Boston, Secretary.

American Society of Clinical Pathologists, Washington, D. C., May 13-16. Dr. Ward T. Burdick, Children's Hospital, Denver, Secretary.

American Surgical Association, Richmond, Va., May 12-14. Dr. R. B. Greenough, 8 Marlborough Street, Boston, Secretary.

American Therapeutic Society, Washington, D. C., May 14-16. Dr. W. J. Mallory, 1720 Connecticut Ave., N. W., Washington, D. C., Secretary.

American Urological Association, Baltimore, May 23-25. Dr. H. G. Hamer, 723 Hume-Mansur Building, Indianapolis, Secretary.

Arizona State Medical Association, Yuma, April 21-23. Dr. D. F. Harbridge, Goodrich Building, Phoenix, Secretary.

Arkansas Medical Society, Little Rock, May 11-13. Dr. William R. Bathurst, 810 Boyle Building, Little Rock, Secretary.

Associated Anesthetists of the United States and Canada, Washington, D. C., May 16-17. Dr. F. H. McMechan, Avon Lake, Ohio, Secretary.

Association of American Physicians, Atlantic City, May 3-4. Dr. F. W. Peabody, Boston City Hospital, Boston, Secretary.

California Medical Association, Los Angeles, April 25-28. Dr. Emma W. Pope, 593 Market Street, San Francisco, Secretary.

Connecticut State Medical Society, Hartford, May 25-26. Dr. C. W. Comfort, Jr., 27 Elm Street, New Haven, Secretary.

Federation of American Societies for Experimental Biology, Rochester, N. Y., April 14-16. Dr. F. C. Koch, University of Chicago, Chicago, Secretary.

Georgia, Medical Association of, Athens, May 11-13. Dr. Allen H. Bunce, 65 Forrest Avenue, Atlanta, Secretary.

Hawaii Territorial Medical Association, Honolulu, May 2-4. Dr. F. J. Pinkerton, 46 Young Building, Honolulu, Secretary.

Illinois State Medical Society, Moline, May 31-June 2. Dr. H. M. Camp, Lahl Building, Monmouth, Secretary.

Iowa State Medical Society, Council Bluffs, May 11-13. Dr. T. B. Throckmorton, Bankers Trust Building, Des Moines, Secretary.

Kansas Medical Society, Hutchinson, May 3-5. Dr. J. F. Hassig, 804 Huron Building, Kansas City, Secretary.

Louisiana State Medical Society, New Orleans, April 26-28. Dr. P. T. Talbot, 1551 Canal Street, New Orleans, Secretary.

Maryland, Medical and Chirurgical Faculty of, Baltimore, April 26-28. Dr. J. A. Chatard, 1211 Cathedral Street, Baltimore, Secretary.

Medical Library Association, Washington, D. C., May 16-17. Miss Sue Bierkan, Library, University of Michigan, Ann Arbor, Sec'y.

Medical Women's National Association, Washington, D. C., May 15-17. Dr. Maud Parker, Medical Dental Building, Seattle, Secretary.

Mississippi State Medical Association, Vicksburg, May 10-12. Dr. T. M. Dye, McWilliams Building, Clarksdale, Secretary.

Missouri State Medical Association, Sedalia, May 2-5. Dr. E. J. Goodwin, 901 Missouri Building, St. Louis, Secretary.

National Association for the Study of Epilepsy, Cincinnati, May 30-31. Dr. A. L. Shaw, 108B Olbiston Building, Utica, N. Y., Secretary.

National Tuberculosis Association, Indianapolis, May 23-26. Dr. G. M. Kober, 1819 Q. Street, N. W., Washington, D. C., Secretary.

Nebraska State Medical Association, Lincoln, May 10-12. Dr. R. B. Adams, McKinley Building, Lincoln, Secretary.

New Mexico Medical Society, Carlsbad, May 9-11. Dr. C. M. Yater, 310 N. Richardson Avenue, Roswell, Secretary.

New York, Medical Society of the State of, Niagara Falls, May 9-12. Dr. D. S. Dougherty, 2 East 103d Street, New York, Secretary.

North Carolina, Medical Society of the State of, Durham, April 18-21. Dr. L. B. McBrayer, Southern Pines, Secretary.

North Dakota State Medical Association, Grand Forks, June 1-2. Dr. J. G. Lamont, San Haven, Acting Secretary.

Ohio State Medical Association, Columbus, May 10-12. Mr. Don K. Martin, 131 East State Street, Columbus, Executive Secretary.

Oklahoma State Medical Association, Muskogee, May 4-6. Dr. C. A. Thompson, 609 Barnes Building, Muskogee, Secretary.

Rhode Island Medical Society, Providence, June 2. Dr. J. W. Leech, 369 Broad Street, Providence, Secretary.

South Carolina Medical Association, Anderson, April 19-21. Dr. E. A. Hines, Seneca, Secretary.

South Dakota State Medical Association, Huron, May 3-5. Dr. John F. D. Cook, Langford, Secretary.

Tennessee State Medical Association, Chattanooga, April 12-14. Dr. J. P. Gallagher, 810 Bennie-Dillon Building, Nashville, Secretary.

Texas, State Medical Association of, El Paso, April 26-28. Dr. Holman Taylor, 207½ West 11th Street, Fort Worth, Secretary.

Current Medical Literature

AMERICAN

The Association library lends periodicals to Fellows of the Association and to individual subscribers to THE JOURNAL in America for a period of three days. No foreign journals are available prior to 1921, nor domestic prior to 1923. Periodicals published by the American Medical Association are not available for lending, but may be supplied on order. Requests should be accompanied by stamps to cover postage (6 cents if one and 12 cents if two periodicals are requested).

Titles marked with an asterisk (*) are abstracted below.

Boston Medical and Surgical Journal

196: 253-296 (Feb. 17) 1927

*Surgical Treatment of Epithelioma of Lip. W. M. Shedden, Boston. —p. 262.
*Migraine. C. W. McClure and M. E. Huntsinger, Boston.—p. 270.

Surgical Treatment of Epithelioma of Lip.—Shedden reports the surgical treatment of epithelioma of the lip. He says that the "radical" neck dissection described will give three-year cures in 76 per cent of the cases. This "radical" dissection will give 42 per cent of cures even when cancer is present in the glands. Metastatic cervical gland cancer can exist in the absence of palpable glands. Palpable glands do not necessarily mean cancer. It is most necessary to excise chronic ulcers and tumors of the lip, if there is a possibility of cancer, and to have a microscopic examination of the tissue excised. Separation of the tumors into pathologic groups depending on relative malignancy is apparently of distinct value as regards prognosis and choice of operation. The delay between onset and admission to the hospital, and that between the visit to the physician and admission to the hospital is too long. The position of the growth on the lip should determine whether the neck dissection is to be bilateral or unilateral. More neck dissections could be done in otherwise inoperable cases, if sufficient narcosis and local anesthesia were employed. Syphilis is not commonly seen with cancer of the lip, and its presence should not delay adequate operative procedures. Heredity plays a minor part in this disease.

Migraine and Gastro-Intestinal Intoxications.—McClure and Huntsinger report observations on twenty-one patients presenting the migrainous type of headache, with associated gastro-intestinal symptoms. Evidences of intoxication were found which it is suggested participate in the production of migrainous symptoms. These evidences are the frequency of the presence of disturbed liver function, and the less often occurring demonstration of protein sensitization. The results obtained suggest the advisability of considering two additional therapeutic measures in selected cases. One of these is the withdrawal of proteins causing anaphylactic reaction; and the other is the treatment of one of the apparent symptoms of migraine; i. e., that of disturbance in the liver's functional state.

Journal of Infectious Diseases, Chicago

40: 1-312 (Jan.) 1927

Microbic Dissociation: Instability of Species; Active Dissociation and Transmissible Autolysis. P. Hadley, Ann Arbor, Mich.—p. 1.

Journal of Nervous and Mental Disease, New York

65: 113-224 (Feb.) 1927

Relation of Cerebellum Weight to Total Brain Weight in Humans and in Animals. C. U. A. Kappers, Amsterdam, Holland.—p. 113.
*Occlusion of Posterior Inferior Cerebellar Artery. G. Wilson and N. W. Winkelman, Philadelphia.—p. 125.
Vertigo: Death Wish. E. E. Hadley, Washington, D. C.—p. 131.
Columnar Arrangement of Primary Afferent Centers in Brain Stem of Man. W. Freeman, Washington, D. C.—p. 149.

Occlusion of Posterior Inferior Cerebellar Artery.—Two cases of occlusion of the posterior inferior cerebellar artery are reported by Wilson and Winkelman. In one case the clinical diagnosis was verified by the necropsy. In addition, other areas of softening, syphilitic in origin, were present in the cerebrum and brain stem. The case was unusual in that clinical evidence of implication of the descending root of the fifth nerve, one of the commonest signs in this condition, was lacking. However, other cranial nerves were involved, and helped to make the localization possible in this case.

Journal of Preventive Medicine, Chicago

1: 205-277 (Jan.) 1927

*Malaria in Philippines. W. v. D. Tiedeman, New York.—p. 205.
*Return Case of Scarlet Fever. J. E. Gordon, Chicago.—p. 255.
Epidemiology of Lobar Pneumonia. M. A. Jacobson, Chicago.—p. 259.

Malaria in Philippines.—A very detailed report is made by Tiedeman on a malaria survey of the Philippines. It appears that malaria is endemic throughout the Islands, but there are certain areas in which it is more prevalent than in others. These are generally at the foot of mountains where mountain streams come from the jungles, and in out-of-the-way places which are more or less undeveloped. Conditions are very favorable for the spread of malaria, *Anopheles* are prevalent, with easy access to persons, and parasite carriers are always present. Although ten different species of *Anopheles* are found, everything points to the two species, *A. minimus* and *A. ludlowii*, as being the most dangerous carriers of malaria. Experiments seem to show that the extensive use of quinine as a prophylactic measure will not be practicable under anything short of military discipline, while the control of mosquito breeding by means of paris green, with the use of such agricultural drainage as is practical, can be accomplished at a low cost.

Return Cases of Scarlet Fever.—There appears to be a parallel relationship between scarlet fever patients discharged with positive hemolytic streptococcus cultures and return cases from the same home. Gordon states that cultures were positive in 91.4 per cent of such infecting cases, compared with a general rate of 47 per cent. Nasal cultures were more frequently positive in infecting cases than in other scarlet fever convalescents.

New York State Journal of Medicine, New York

27: 103-150 (Feb. 1) 1927

Supernumerary Ureters with Extravesical Openings. H. D. Furniss, New York.—p. 103.
Diseases of Liver and Biliary Passages. C. S. McVicar, Rochester, Minn. —p. 109.
Age of Public Health. M. Nicoll, Jr., Albany.—p. 114.
Radium Therapy in Carcinoma of Cervix. W. P. Healy, New York.—p. 116.
Bronchopulmonary Spirochetosis; 100 Cases. D. T. Smith, Ray Brook.—p. 119.
*Diagnosis of Early Diabetes. F. R. Wright, Clifton Springs.—p. 122.
Pyelitis of Focal (Tonsil) Origin. M. Zigler, New York.—p. 124.

Diagnosis of Early Diabetes.—Wright makes use of Brill's modified glucose tolerance or food test. In this test the night urine is collected, and a sample of the fasting blood obtained. A breakfast consisting of 100 Gm. of carbohydrate, 26 Gm. of protein and 27 Gm. of fat is fed, and two hours later a second sample of blood is drawn. The urine excreted during the four hours following the meal is also saved. The sugar content of the two specimens of blood and of the two specimens of urine is determined. By studying the concentration in the fasting blood and the change in the concentration of a specimen taken two hours after the meal, a fair knowledge of whether the carbohydrate metabolism is disturbed may be gained. The 268 cases selected in this problem offered signs or symptoms which suggested some abnormality in carbohydrate metabolism, and yet the disturbance in metabolism was not sufficient to warrant a diagnosis of diabetes at the preliminary examination. These patients showed transient glycosuria, were obese, had neuritis, suffered from substernal pains, or had furunculosis. By this test, eighty-one did not show any distinct evidence of impaired carbohydrate metabolism, and were considered negative; while 187 showed an abnormal blood sugar curve and glycosuria, and were classed as positive. Forty-five cases showing glycosuria were negative according to the test meal. Of the 179 cases of glycosuria, a history of sugar in the urine previous to the test was not given in sixty-four. Sixty-eight patients had a normal fasting blood sugar, but showed a hyperglycemia and glycosuria two hours after the meal.

Philippine Journal of Science, Manila

31: 431-559 (Dec.) 1926

*Factors Influencing, in Vivo, Result of Globulin Precipitation Test. K. Yasuyama, Manila.—p. 431.

Factors Influencing Globulin Precipitation Test.—Yasuyama asserts that the decrease in concentration of salts in the circulating blood causes the globulin precipitation reaction to become stronger. The increase in concentration of salts in the circulating blood brings about a weaker or a completely negative result. The increase of protein in the circulating blood has, as a consequence, a very strongly positive globulin precipitation reaction. The influence on the result of the reaction of the increased protein content in the circulating blood can be detected for a much longer time than can the effect on the reaction of the increased or decreased salt content in the circulating blood. The influence of general anesthesia, starving and feeding on the result of the reaction in herbivorous animals is not perceptible. Exudation, however, into serous cavities produces increase in strength of the globulin precipitation reaction. The administration, as a food, of protein by mouth to herbivorous animals does not influence the result of globulin reaction. Repeated bleeding at relatively short intervals also influences the result of the reaction in a positive direction.

Surgery, Gynecology and Obstetrics, Chicago

44: 145-288 (Feb.) 1927

*Surgery of Nerves of Hand. S. Bunnell, San Francisco.—p. 145.
*Cholecystography: Mechanism of Emptying Gallbladder. E. A. Graham, St. Louis.—p. 153.
*True Prostatic Calculi. H. L. Kretschmer, Chicago.—p. 163.
Benign Adenoma of Kidney: Case. E. S. Judd and H. E. Simon, Rochester, Minn.—p. 169.
*Adamantine Epithelioma. W. S. Bump, Chicago.—p. 173.
Transplantation of Skin. J. S. Davis, Baltimore.—p. 181.
*Hyperinsulinism. H. J. John, Cleveland.—p. 190.
*Bradytocia: Five Hundred Cases. D. A. Horner, Chicago.—p. 194.
*Tumors of Gasserian Ganglion. M. M. Peet, Ann Arbor, Mich.—p. 202.
Clinical Importance of Buck's and Colles' Fascia. M. B. Wesson, San Francisco.—p. 208.
Partial Gastrectomy. J. S. Horsley, Richmond, Va.—p. 215.
Forceps Delivery. E. L. Cornell, Chicago.—p. 221.
Sigmoidostomy After Radical Operations for Rectal Cancer. E. H. Hutchins, Baltimore.—p. 225.
*Radiographic Simulation of Renal Calculi by Papillomata of Skin: Two Cases. M. M. Melicow and H. H. Gile, New York.—p. 230.
*Malignant Tumors of Fatty Tissues. J. V. Seids and R. S. McGinnis, Cleveland.—p. 232.
*Improvement of Speech in Cleft Palate Cases. H. L. D. Kirkham, Houston, Texas.—p. 244.
Use of Seton in Repair of Torn or Strictured Urethra: Two Cases. G. L. McWhorter, Chicago.—p. 247.
*Preparation and Management of Surgical Diabetic Patient. G. G. Duncan, Philadelphia, and I. F. Frost, Morristown, N. J.—p. 253.
*Modified Technic for Difficult Inguinal Hernias. C. E. Farr, New York.—p. 261.
New Apparatus for Transfusion of Untreated Blood. J. R. Head, Chicago.—p. 262.
*Untreated Cancer of Breast. E. M. Daland, Boston.—p. 264.

Surgery of Nerves of Hand.—Bunnell emphasizes the fact that loss of function of the nerves of the hand and fingers is of vital importance to the manual worker, as the resulting disability is great. These nerves are readily repaired by surgery, and will regenerate more uniformly, promptly and completely than after any other nerve repair.

Value of Cholecystography.—The gallbladder has been removed and subjected to microscopic examination by Graham in 147 cases. In 143 of these cases the roentgen-ray diagnosis has been confirmed, showing a percentage of correctness of 97.28.

True Prostatic Calculi.—This paper is based on a series of seventy-six cases that have been under Kretschmer's observation. It would appear, therefore, that prostatic calculi are not so rare as has been stated. Doubtless, with the routine use of the roentgen ray in urologic work which obtains today, an increasing number of cases will be found.

Adamantine Epithelioma.—Two adamantine epitheliomas are reported by Bump: one, a practically solid tumor, occurring in the right side of the upper jaw of a man, aged 58, following the formation of an alveolar abscess, present for eight years before treatment, and recurring three years after removal by the curette and electrocautery; the other an infected tumor, occurring in the left side of the lower jaw of a woman, aged 25, following the removal of an impacted, third molar tooth, and present for two and one-half years before operation.

Hyperinsulinism.—John warns against the danger of hyperinsulinism. The symptoms of hyperinsulinism are so similar to those of hyperthyroidism that it is difficult to make a differential diagnosis between these conditions on the basis of the symptoms alone. Consequently, hyperinsulinism should always be ruled out by a blood sugar examination, if hyperthyroidism is suspected in a patient who is being treated with insulin. The treatment of hyperinsulinism is simple—merely the discontinuance of insulin. If this is insufficient, the administration of some food between meals will be effective. Voracious hunger a few hours after the administration of insulin usually indicates hypoglycemia.

Bradytocia.—Horner analyzed 500 cases of slow parturition, representing virtually 10 per cent of the whole number of deliveries occurring in the institution in a selected period. Four hundred of these 500 cases occurred in primiparas between the ages of 19 and 30. The duration of the labor varied from twenty-four to 134 hours. In 148 cases it exceeded thirty-six hours. In 242 cases the expulsive power was deficient; in all the cases a disproportion was present. Postpartum hemorrhage occurred in sixty-nine cases; in fifty-two of these the delivery was operative; the average duration of labor was forty and one-half hours. Eleven babies were born dead. In two cases craniotomy was performed. Sixteen babies died before the mother left the hospital. There was no maternal mortality.

Tumors of Gasserian Ganglion.—Two cases are reported by Peet in which the gasserian ganglion is infiltrated by extension through the maxillary branch, the carcinoma originating in the antrum or ethmoid region.

Radiographic Simulation of Renal Calculi by Skin Papilloma.—Two cases are reported by Melicow and Gile in which papillomas of the skin of the back cast shadows in roentgenograms which resembled those of renal calculi. These cases illustrate the importance of looking for and noting the presence of any skin growths when referring a patient for radiography.

Liposarcoma.—Five cases of liposarcoma are recorded by Seids and McGinnis. Two were situated in the abdomen; two in the thigh, and one at the knee. The authors feel that the highly malignant nature of these tumors is not properly appreciated. They should be dealt with radically, as in the case of other malignant neoplasms, by thorough extirpation followed with roentgen-ray treatment.

Improvement of Speech in Cleft Palate Cases.—Kirkham is convinced that some method of shortening the superior constrictor along its upper border will be the keynote to improvement in speech in palate cases. He suggests suturing it to the posterior surface of the palate and palatopharyngeus

Preparing Diabetic Patients for Operation.—A classification of surgical diabetic cases based on the preparation and apparent risk is presented by Duncan and Frost. Diets high in carbohydrate, and low in fat and total calories for preparation for operation and restriction of the total calories to at least a maintenance level during the active stage of healing have proved to be the most effective dietetic measures in these cases. Insulin given immediately before operation, and glucose intravenously immediately after, are considered important factors in preventing ketosis and vomiting. Every effort to keep the blood sugar normal throughout was made in each case.

Herniotomy for Difficult Cases.—The operation described by Farr consists of the usual Bassini technic up to and including the placing of the deep sutures, and preceded, if possible, by a separate suture of the transversalis aponeurosis with fine chromic catgut, thus reenforcing a weak spot at the deep ring. With the usual deep sutures of chromic catgut in place, it is easy to estimate the amount of tension necessary to approximate the conjoined tendon to Poupart's ligament. If the tension seems too great for the tissues or the sutures to

bear safely, they are left untied until the next step. This consists of dissecting the skin and fat away from the rectus sheath and the external oblique aponeurosis. The belly of the muscle is exposed freely, the conjoined tendon and the edge of the rectus sheath being allowed to approximate Poupart's ligament without tension. In some cases the fascial line of the linea semilunaris can be drawn to Poupart's ligament for a distance of 2 inches (5 cm.). The sutures are then tied, the cord transplanted, and the external oblique muscle imbricated.

Analysis of Untreated Breast Cancer.—One hundred cases of cancer of the breast, untreated by operation, roentgen ray or radium are analyzed by Daland. Duration of life is computed from the time of the first symptom noticed by the patient. The average duration was 40.5 months, the mean duration thirty months. The longest duration was found between the ages of 60 and 64, the shortest between 55 and 59, except for one patient who was 33 years of age. Length of life in untreated cases is compared with the length of life in two operative series. In the untreated series, 40 per cent were alive at the end of three years, 22 per cent after five years, 9 per cent after seven years, and 5 per cent at the end of ten years. The last patients died thirteen years after their first symptom. A definite relationship could not be observed between previous pregnancies or diseases of the breast and the cancer. Lung or pleural metastasis was observed in eighteen cases; involvement of the liver in eleven cases. Twenty-two per cent of the patients had swollen arms. These patients did not live quite as long as the average of the series. Fifteen per cent had bone metastases. They lived slightly longer than the average. A study of the degree of malignancy, as made by microscopic study, failed to show any relationship between the length of life and the degree of malignancy.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British Journal of Tuberculosis, London

21: 1-62 (Jan.) 1927

Tuberculosis Village Settlement. P. C. Varrier-Jones.—p. 17.
Tuberculosis in India. C. Muthu.—p. 23.

Irish Journal of Medical Science, Dublin

6: 1-48 (Jan.) 1927

Tuberculosis of Bladder and Kidney. A. Fullerton.—p. 5.
Medical Research. J. W. Bigger.—p. 15.
Porphyrinuria. W. R. Fearon.—p. 28.
Case of Well Marked Hypospadias. C. M. West.—p. 29.
Acute Emergencies of General Practice: Acute Intestinal Obstruction. W. Taylor.—p. 34.

Kenya Medical Journal, Nairobi, East Africa

3: 241-270 (Dec.) 1926

Yaws and Syphilis Among Natives in Belgian Congo. R. Mouchet. —p. 242.
*Garrow and Dreyer Agglutination Technics. G. V. Allen.—p. 245.
Toxic Erythemata Simulating Scarlatina. K. A. T. Martin.—p. 257.
*Case of Idiosyncrasy for Carbon Tetrachloride. J. A. Carman.—p. 260.
Ten Months of Malaria in Kisumu. C. H. Brennan.—p. 261.
Pseudocyesis in Kikuyu. G. S. M. Chataway.—p. 264.
Susceptibility of Ornithodorus to Fire. P. C. C. Garnham.—p. 265.
Decapsulization of Kidney in Blackwater Fever. C. V. Braimbridge. —p. 267.
Inguinal Hernia: Two Cases. J. A. Ross.—p. 267.
*Intussusception in Kavirondo Girl. C. P. Donnison.—p. 268.

Comparison of Garrow and Dreyer Technics for Agglutination.—There was agreement as regards the actual occurrence of agglutination between the Dreyer and the Garrow technics in 91.8 per cent of the serums examined by Allen. The results recorded suggest that if sensitive agglutinable cultures are used, positive agglutination results will be obtained as early in the tropics as in temperate climates in diseases due to the typhoid group of organisms.

Idiosyncrasy for Carbon Tetrachloride.—Carman reports a case of poisoning with carbon tetrachloride after a single dose of 4 cc. administered to a boy suffering from uncinariasis. The boy recovered.

Ileocecal Intussusception.—This patient was 13 years of age. The intussusception extended into the transverse colon. It was about 7 inches long; the terminal 3 inches were gangrenous. The patient had suffered from abdominal pain for two months.

Lancet, London

1: 163-214 (Jan. 22) 1927

Anesthetics. J. R. Mackenzie.—p. 163.
*Need for Medical Teaching on Birth Control. A. E. Giles.—p.165.
*Specific Stimulation Therapy and Protective Inoculation in Tuberculosis. G. Schröder.—p. 167.
*Effect of Parturition on Heart: Pregnancy with Auricular Fibrillation. A. L. Robinson.—p. 170.
*Deaths Under Anesthetics. A. G. Levy.—p. 173.
Spondylitis Deformans with Myositis Ossificans. C. W. Healey.—p. 174.
*Preventive Treatment of Summer Diarrhea. R. Carter.—p. 176.
Schick Test in School Practice. W. Dunn, F. H. Wallace and A. R. Beaumont.—p. 178.
Necrosis of Posterior Wall Complicating Mastoiditis. F. W. Watkyn-Thomas.—p. 179.
Massive Collapse of Lungs Complicating Acute Meningitis. N. Kletz. —p. 179.

Teaching Birth Control.—Giles is of the opinion that birth control is a necessity on medical grounds in certain circumstances, and it is expedient on economic grounds in a few cases. The medical profession should lay down its indications and point out its limitations. To those who wish to practice it for economic reasons, its risks and drawbacks, immediate and remote, should be pointed out; and when it is necessary, the best method to be adopted in each individual case should be explained.

Serum Therapy in Tuberculosis.—Schröder regards serum therapy in tuberculosis as a nonspecific stimulant therapy. It is obviously not by any means easy, and needs such a careful observation of indications and so exact a clinical control that it cannot be carried out under ambulant conditions without the greatest difficulty. It is not possible to state the results of specific treatment statistically. The recoveries which Schröder has seen are about the same statistically as those obtained with gold salts alone, or exclusively with general remedies. The value of specific therapy can be estimated only in each case separately.

Effect of Parturition on Heart.—The results reported by Robinson show that heart failure is a dangerous complication in parturition and suggest that the rational basis for the treatment of heart disease and pregnancy depends on three important facts: 1. Pregnancy and labor absorb the reserve power of the heart, and the amount of reserve force required increases as term approaches. 2. A woman with organic heart disease who becomes pregnant starts with a depleted cardiac reserve, which may or may not be sufficient for the inevitably increasing demands of the pregnant state. 3. Labor in the presence of severe heart failure is either immediately fatal or greatly hastens the fatal termination of the case. A woman with serious depletion of the cardiac reserve should not become pregnant. If conception occurs in the presence of seriously depleted reserve, the pregnancy ought to be terminated before the onset of heart failure. The induction of labor in the presence of heart failure is unjustifiable. Artificial termination of the pregnancy should be carried out when cardiac compensation has been reestablished—and in many cases cesarean section is the best method of delivery.

Deaths Under Anesthesia.—Levy discusses the deaths from anesthetics in England and Wales from 1911 to 1923. The number has been steadily increasing, rising from 276 in 1911 to 446 in 1923.

Treatment of Summer Diarrhea.—In cases of zymotic diarrhea, Carter proposes absolute starvation for at least twenty-four hours, and, when the vomiting has subsided half a teaspoonful of salt to the pint of water—given in bottlefuls cold, and the child allowed to drink as much as he wants. One teaspoonful of castor oil is to be given when the vomiting has subsided, and this is the only drug administered. At the same time, the intestine is washed out with salt solution, and this is to be continued once a day while the diarrhea lasts. The next day the child must be given food which it can digest. In this condition any food having a high protein and a low fat content is suitable, such as skimmed dry milk, protein

milk or malted milk. Carter found that malted milk is better tolerated than skimmed milk during the acute stage. He advises the giving of two teaspoonfuls of malted milk in 2 ounces (60 cc.) of water every three hours if the infant is under 3 months; when over 3 months, 3 ounces (90 cc.) of the food is to be given, and if this amount is tolerated and the child is not satisfied, the quantity of malted milk can be increased a teaspoonful a day with an ounce of water. The best results are obtained when malted milk is given for at least five days, or until symptoms of acute dyspepsia have subsided.

Bulletin de l'Académie de Médecine, Paris

97: 101-112 (Jan. 18) 1927

*Chiasmal Syndrome and Fracture of the Skull. F. Terrien.—p. 102.
Therapeutic Value of Lipid Extract of the Spleen. Rémond et al. —p. 106.

Syndrome of Injury to the Optic Chiasm.—In Terrien's case a young woman developed bitemporal hemianopia following fracture of the base of the skull. The hemianopia could be caused only by a lesion of the optic chiasm. The lesion was due to extension of the fracture; there may have been also rupture of vessels and subsequent pressure on the chiasm by a hematoma. The lesion of the chiasm resulted in atrophy of the optic nerve, starting four months after the accident. The pupillary reflex reappeared in one eye; in the other there was paralysis of the third cranial nerve. The symptoms of a chiasmal lesion must be differentiated from those of an oculomotor lesion. The former appear later and disappear as soon as the pressure is relieved. Oculomotor symptoms from severing of the nervous trunks appear immediately and are permanent.

Paris Médical

63: 53-84 (Jan. 15) 1927

Dermatology in 1927. G. Milian and L. Brodier.—p. 53.
Treatment of Eczema and Eczematoid Lesions. L. Brocq.—p. 59.
*Study of Xanthoma. M. Louste.—p. 64.
New Form of Pustular Dermatitis. Gougerot.—p. 69.
*Skin Reactions to Ultraviolet Rays. E. and H. Biancani.—p. 72.
*Infectious Urticaria. G. Milian.—p. 81.

Study of Xanthoma.—Louste summarizes the histologic, physiologic and pathogenic researches on xanthoma. The lesion is formed of large connective tissue cells, xanthoma cells containing fatty granules. The latter represent neutral fats, or glycerin ester, and lipoids, or cholesterol ester. Fatty acids in excess in the blood are retained in these cells and oxidized. The rôle in the phenomenon of amboceptor cells or Langerhans' cells is explained. Thus hypercholesterolemia is a factor in the formation of xanthoma. Hypercholesterolemia results from disturbed functioning of the liver, the pancreas or other endocrine glands. Xanthoma may be connected with syphilis. The primary cause should be considered in the treatment.

Injuries to the Skin from Ultraviolet Rays.—Acute inflammation is the most frequent skin lesion from the therapeutic use of ultraviolet rays. It develops in persons with a special sensitiveness and sometimes appears in a region beyond that exposed. Repeated irritations of the skin by the rays causes chronic lesions, a precancerous dermatitis. Sunburn, freckles, eczema, hydroa, keratosis senilis and xeroderma pigmentosum are manifestations of the reaction of the skin to the ultraviolet rays of the sun. The effect of ultraviolet rays is reduced by association with red or infra-red rays. It is less pronounced in dark skins, namely in brunettes or in members of the colored races. Certain substances, such as eosin, hematoporphyrin or acridin, on being introduced into the organism render it more sensitive to the sun's rays (photosensitization). The phenomena of pellagra may possibly be due to photosensitization, the cereal toxin causing the sensitization. Medicinal eruptions and possibly eruptions in infectious diseases can be ascribed to photosensitization. Hepatic insufficiency occasions appearance in the blood of photosensitizing substances, such as acid-amines, tyrosin and tryptophan. Hypersensitiveness to rays is observed sometimes in tuberculous persons and in pregnant women. Irritation of the skin from ultraviolet rays can be averted by applying quinine ointment or a soap containing sodium naphthosulphate. Applications of tannin incorporated in petrolatum or alcohol (1:10) are effective. In case of photosensitization, resorcin is indicated. Exposures repeated at short intervals may possibly immunize the skin against morbid irritation from rays.

Urticaria of Infectious Origin.—Milian believes that in the majority of cases urticaria is infectious. He observed cases of urticaria accompanying infectious jaundice. In recurring urticaria, of the type of Quincke's disease, syphilis was undoubtedly a cause. Urticaria is frequently associated with furunculosis or anthrax. A case is described in which a generalized urticaria coincided with a staphylococcus abscess. Treatment with galyl (which contains phosphoric acid) by the vein resulted in the healing of the suppuration and the simultaneous disappearance of the urticaria. Urticaria had first appeared in this patient six years before, when he was afflicted with suppurating wounds. Two similar cases are reported.

Presse Médicale, Paris

35: 145-160 (Feb. 2) 1927

*Monocytes, Monocytosis and Monocyte Leukemia. Merklen and M. Wolf.—p. 145.
Modern Methods of Serodiagnosis of Syphilis. M. Rubinstein.—p. 149.

Monocytes, Monocytosis and Monocyte Leukemia.—Merklen and Wolf detail the characteristics which differentiate monocytes from other leukocytes. The monocytes originate in the reticulo-endothelial tissue. Clinical and anatomic pathologic observations indicate that changes in the monocyte count of the blood depend on changes in the reticulo-endothelial tissue. Monocytosis may be of reticular or of endothelial origin. The monocytosis of typhoid is caused by hyperplasia of the reticular tissue (spleen, glands, Peyer's patches, etc.). The same is true of the monocytosis of smallpox, chickenpox, mumps, whooping cough and measles. The acute diseases that are accompanied by monocytosis are those that induce immunity. The monocytosis is endothelial in infectious endocarditis, typhus and at the end of septicemia. In endothelial monocytosis there is a tendency to hemorrhages and purpura. Among chronic diseases, monocytosis is found in malaria, leishmaniasis, kala-azar, relapsing fever, amebic dysentery, etc. It is an indicator of the reaction of the reticular system to the parasite. Decrease in the number of monocytes is noted in certain pernicious anemias and in highly acute infections. A form of leukemia exists in which monocytes prevail in the blood. This monocytic leukemia lasts for months or years; it is always fatal. Necropsy shows proliferation of the reticular tissue. Persistent monocytosis may coexist with myeloid and lymphatic leukemia. In aleukemia the hyperplastic process may involve the reticular or the endothelial tissue.

Policlinico, Rome

34: 43-82 (Jan. 10) 1927

Intracardiac Injection of Epinephrine in Surgical Syncope. A. Frizzera. —p. 45.
Idem in Apparently Stillborn Infants. A. Tommasini-Mattiucci.—p. 48.
Idem in Anesthesia. F. Graziani.—p. 49.
*"Crossing Sign" in Congenital Dislocation of the Hip. E. Ettorre. —p. 51.

"Crossing Sign" in Congenital Dislocation of the Hip.—Ettorre observed that in children with congenital dislocation of the hip, the thigh may be adducted so far that it crosses the other thigh above the patella and sometimes nearly at the base of the thigh. The pelvis must be kept from turning with the thigh. The sign is useful, although not pathognomonic of the dislocation. It is also caused by coxa vara and by abnormal motility of the hip following poliomyelitis.

34: 83-126 (Jan. 17) 1927

*Roentgen-Ray Diagnosis of Ascariasis. M. Muzii.—p. 83.
*Complications of Rectal Gonorrhea. G. Antonelli.—p. 85.
Atypical Syphilomas. A. Pozzo.—p. 90.

Roentgen-Ray Diagnosis of Ascariasis.—Muzii publishes roentgenograms of three cases of ascariasis. In one of them, he says, this examination "disarmed the hand of the surgeon."

Complications of Rectal Gonorrhea.—Antonelli reports the anorectal gonorrheal infection of an elderly married man, acquired by passive homosexual relations. A perianal abscess and polyarthritis followed.

Riforma Medica, Naples

43: 25-48 (Jan. 10) 1927

*Direction of Clinical Studies. G. Viola.—p. 25.
Complete Situs Viscerum Inversus. G. Arena.—p. 27.
Sporotrichosis of Mediastinum. U. Benedetti et al.—p. 29.
Local Vaccine Treatment. F. Cantani.—p. 31.
*Tryptophan Test in Cerebrospinal Fluid. G. Aiello.—p. 35.
Stenosis of Esophagus from an Unnoticed Foreign Body. M. P. Poliak. —p. 44.

Direction of Clinical Studies.—Viola comments on the principles for selecting clinical teachers agreed upon by himself and Zoia, Micheli, Ceconi and Centanni at the occasion of the competition for the medical clinic in Modena. They require thorough preparation in pathology, chemistry and other sciences, as well as long service at the clinic. The published work of the physicians chosen should present a selection of important problems and give new results: too many papers and even books are printed with the sole aim of aiding the writer to obtain a job rather than of advancing science. Truly clinical problems—symptomatology and treatment of sick human beings—which are the proper purpose of the clinic, should form a good part of the publications. Problems which do not bear directly on these belong to the realm of pathology, not to that of clinical medicine. Great stress is put on monographs and original syntheses of complex clinical problems, as well as on a rigorously scientific method of investigation and speculation.

Tryptophan Test of the Cerebrospinal Fluid.—Aiello reviews the literature on the test which he recommended in 1922 for the diagnosis of tuberculous meningitis. He mixes from 2 to 3 cc. of the clear spinal fluid with from 15 to 18 cc. of concentrated fuming hydrochloric acid (specific gravity at least 1020) and 1 or 2 drops of a 2 per cent solution of formaldehyde. After four to five minutes from 25 to 30 drops of a 0.06 per cent solution of sodium nitrite is slowly added along the side of the test tube. A violet ring develops within a few minutes at the point of contact if tryptophan is present. A yellow cloud forms in negative cases. The literature (ten articles) contains 1,000 cases. The reaction was positive in more than 90 per cent of the cases of tuberculous meningitis. A negative reaction almost excludes the disease. There were only 2 per cent of false positive results. The presence of tryptophan is probably due to cleavage of fibrin by autolytic enzymes.

Klinische Wochenschrift, Berlin

6: 1-48 (Jan. 1) 1927

Epidemics in Last Five Years. A. Gottstein.—p. 1.
*Traumatic Diabetes. F. Umber and M. Rosenberg.—p. 5.
*Inflammation, Pain and Acidity. W. von Gaza and B. Brandi.—p. 11.
Phosphatides, Iron and Vitamin Requirements of Bacteria. W. Kollath. —p. 13.
*Heart Work Without Oxygen. H. Freund and W. König.—p. 16.
Photographic Phenomena and Antirachitic Action.—H. Vollmer.—p. 17.
Daylight Projectoscope for the Operating Room. G. von Pannewitz.—p. 19.
Following the Electrocardiographic Curve During Surgical Interventions. E. Rehn and H. Reisinger.—p. 20.
*Syphilitic Reagins in Amniotic Fluid. E. Nathan.—p. 21.
"Gastric Secretion and the Pupils." Krause-Wichmann.—p. 22.
Reply. D. Adlersberg and F. Kauders.—p. 23.
Diagnosis of Univitelline Twins. Leven.—p. 23.
*Reversal of Pharmacologic Action. L. Asher and H. Scheinfinkel.—p. 23.
Autolytic Ammonia Formation and Nuclein Metabolism. P. György and H. Röthler.—p. 24.
*Jaundice from Cinchophen. D. Klinkert.—p. 24.
Fixed Rashes from Drugs. O. Naegeli.—p. 25.
French Social Insurance. K. Freudenberg.—p. 29.
Respiration of Surviving Tissue. H. Groll.—p. 30.
Instruments for Lumbar Puncture. K. Eskuchen.—p. 46.
Murmurs in Mitral Diseases. S. Bondi.—p. 47.

Traumatic Diabetes.—Umber and Rosenberg believe that an injury can aggravate or provoke latent diabetes, but cannot cause it. The glycosuria that is sometimes observed after injuries to the head is not true diabetes.

Inflammation, Pain and Acidity.—Gaza and Brandi puncture the furuncle, aspirate the pus and inject in its place a solution consisting of disodium phosphate, 6.49 Gm.; sodium chloride, 6.44 Gm., and water to 1 liter. The p_H of this solution is 9.1. The pain stops for from half a day to about twenty-four hours. The alkaline solution is also suitable for treatment of painful ulcers (especially roentgen-ray ulcers). They attribute the pain in inflammations wholly to increased acidity of the tissue.

Heart Work Without Oxygen.—Freund and König observed recuperation of the frog's heart, kept under anoxybiotic conditions, after adding dextrose, alanin, glycocoll or glycogen to the perfusing fluid. A further improvement was noted on addition of methylene blue (as hydrogen acceptor) to these fluids (with the exception of that containing glycogen).

Syphilitic Reagins in Amniotic Fluid.—Nathan made complement fixation tests with the amniotic fluid. He found the reaction reliable and publishes his technic.

Reversal of Pharmacologic Action.—Asher and Scheinfinkel showed it to be probable that the reversal of action of atropine by the cholates ("the heart regulating hormone of the liver") is due to the capillary activity of these salts. Caprylic alcohol has the same effect, but other alcohols, which have less influence on surface tension, are inactive in this regard. Quinine and its derivatives also lower the surface tension and reverse the action of atropine. They made analogous experiments with ergotamine and found that under the influence of caprylic alcohol it stimulates the sympathetic instead of paralyzing it.

Jaundice from Cinchophen.—Klinkert reports a third case of mechanical jaundice due to continued intake of cinchophen (to a total of about 80 Gm.).

Münchener Medizinische Wochenschrift, Munich

73: 2237-2260 (Dec. 31) 1926

Waves of Disease. H. Curschmann.—p. 2237.
*Elastometry of Tissues. H. Schade.—p. 2241.
Arsphenamine Treatment of Therapeutic Malaria. B. Spiethoff.—p. 2246.
Cause of Rheumatism. A. Strauss.—p. 2246.
*Growth of Dysentery Bacilli in Bile. H. Spranger.—p. 2247.
Apparatus for Nitrous Oxide Anesthesia. H. Schmidt.—p. 2248.
Atypical Rash in Typhoid. B. Trusewitsch.—p. 2249.
Medicolegal Obstetrics. M. Hofmeier.—p. 2250.
Treatment of Diabetes Insipidus. Friedländer.—p. 2250.
Apparatus for Gymnastics. F. Ruszynski.—p. 2251.
Container for Serial Injections. H. Caspary.—p. 2251.

Elastometry of Tissues.—Schade has constructed a handy apparatus for clinical use in measuring the elasticity of the skin. It can also serve for determining the elasticity of organs at necropsy. With it the diagnosis of edema in the early stages is easy, even when palpation fails. Collateral edema with deep, inflammatory foci may be localized. Latent changes in the tissue may be distinguished from purely mental disturbances.

Growth of Dysentery Bacilli in Bile.—Spranger found that addition of blood counteracts the inhibitory influence of bile on the growth of Shiga bacilli. The other types of dysentery bacilli grow well in bile, even without addition of blood.

Zentralblatt für Gynäkologie, Leipzig

50: 2993-3056 (Nov. 20) 1926

*Disturbances of Induced Amenorrhea. R. Köhler and T. Revesz. —p. 2994.
*Quinine in Treatment of Abortion. R. Kessler.—p. 3003.
*The Question of a Placental Poison. K. von Oettingen and B. Schwoerer.—p. 3009.
Statistics of Abortion. H. Nevermann.—p. 3022.
*Air Embolism in Cesarean Section. W. G. Deucher.—p. 3025.
*Thirteen Year Cure of Cervical Cancer by Radium. F. Dautwitz. —p. 3027.
Why the Curved Laminaria Tent? W. Pfeilsticker.—p. 3039.
Technic of Beuttner's Operation on the Adnexa. O. P. Mansfeld.—p. 3040.
Rupture of the Umbilical Cord During Labor. A. Matusovsky.—p. 3044.

The Blood in Amenorrhea.—To test the validity of Aschner's contention of an accumulation of toxic properties in the blood after artificial arrestation of menstruation, Köhler and Revesz made chemical examinations of the blood of twenty women in whom the function of menstruation was preserved,

of twenty-eight women who had undergone hysterectomy with retention of the ovaries and of three women in the menopause. They found no basis for Aschner's assertion.

Expectant Treatment with Quinine in Septic Abortion.—In the Kiel university women's clinic the uterus is emptied at once in cases of abortion if there is severe hemorrhage. Otherwise the patient is watched for from twelve to twenty-four hours; if fever does not appear and the abortion cannot be prevented, the uterus is emptied; but if the temperature in the axilla goes above 37.5 C., the treatment is conservative. Five doses of quinine, 0.2 Gm. each, are given perorally, from one to two hours apart. If the uterus does not show a tendency to contract, pituitary extract may be given. If spontaneous evacuation of the uterus does not take place within the first two days, the quinine treatment is repeated on the third day. Tables are given showing in detail the results obtained in complicated and uncomplicated cases. In fourteen of eighty-six cases of imminent abortion, the fetus was expelled within the first twelve hours. Kessler maintains that this method is almost as rapid as the active method in the matter of emptying the uterus, and that it is probably less dangerous as regards transuterine complications. The hospital stay is, on the average, two days longer than with active treatment. Under the expectant treatment there was one death in 107 uncomplicated febrile cases, seventeen deaths in thirty-eight complicated cases.

The Question of a Placental Poison.—Obata maintained that the cause of eclampsia was intoxication from a placental poison, which, ordinarily neutralized by the serum, became noxious when the serum failed to function fully in this respect. The results of Oettingen and Schwoerer's experiments, on animals and in vitro, do not confirm the existence of a specific placental or eclamptic poison. They show rather that extracts of various other organs besides the placenta are capable of producing the typical phenomena of eclampsia, when injected into the veins of animals. The poisonous effects of the extracts can be neutralized by serum. The detoxication of these extracts by serum was found to take place by means of a combining reaction on the basis of colloidal processes. Renal disease or eclampsia in a pregnant woman appeared to diminish the capacity of the serum to detoxicate these extracts.

Air Embolism in Cesarean Section.—When Deucher's patient, apparently in good condition, was being removed from the operating table after a successfully performed transperitoneal cervical cesarean section, a severe hemorrhage from the vagina set in suddenly, respiration, hitherto quiet, became spasmodic, and the patient became cyanotic and died. At necropsy, performed two and one-half hours after death, typical signs of air embolism were found. In view of the hemorrhage, it seems probable that uterine atony caused the lumina of the empty veins of the floor of the placenta and perhaps of the cervical wound to gap and that moving the patient just at this time caused aspiration of air into a vein. He draws the conclusion that with atonic uterus one should most carefully avoid anything capable of causing negative pressure variations in the abdominal space.

Results of Radium Treatment of a Cervical Cancer.—Thirteen years ago Dautwitz treated with radium a woman, aged 53, for cancer of the cervix, which had been excochleated and cauterized. The patient is still alive. Radium treatment was continued at intervals over a period of four years, and resulted in injury to the intestinal mucosa, manifested as hemorrhagic proctitis and sigmoiditis. Six months from the beginning of the treatment joint disturbances appeared, which seven years later became worse. It is doubtful whether these are due to arthritis deformans or are a result of the irradiation. Dautwitz gives the details of his treatment.

Zentralblatt für innere Medizin, Leipzig

48: 1-32 (Jan. 1) 1927

Arterial Hypertension. F. Volhard.—p. 1.

48: 33-56 (Jan. 8) 1927

*Clinical Significance of Pyelography. T. Cohn.—p. 33.

Clinical Significance of Pyelography.—Cohn has used air to fill the pelvis of the kidney for pyelographic purposes in 160 patients (248 fillings). Disturbances were slight. He also discusses other methods and the indications for pyelography.

48: 57-88 (Jan. 15) 1927

*Menotoxins. B. Aschner.—p. 58.

Menotoxins.—Aschner believes that menstruation removes toxic products from the body. He also believes that insufficient menstruation is a frequent cause of various disturbances, such as skin diseases, inflammation of any part of the eye, mental disturbances and even psychoses, arthritis and neuralgia, migraine, bronchitis, hemoptysis, asthma, obesity, plethora and a number of other conditions. Saline laxatives, venesection and emmenagogues are indicated. After almost every laparotomy he removes 250 cc. of blood and believes that this accounts for the practical absence of thrombosis and pulmonary complications in his patients. He is convinced of the importance of humoral pathology (THE JOURNAL, May 30, 1925, p. 1704) as opposed to Virchow's cellular pathology, and of therapeutics based on this principle.

Mikrobiologicheskiy Jurnal, Leningrad

3: 151-236, 1926. Partial Index

*Antigens Obtained by Means of Bacteriophagic Lysin. Maslakovets and Kazarnovskaya.—p. 151.

Bacteriologic Study of Malignant Endocarditis. Gartokh et al.—p. 156.

Reaction of the Skin to Derivatives of Streptococcus Toxin. V. N. Kosmodemianskiy.—p. 169.

Antigens Obtained by Means of Bacteriophagic Lysin.—Maslakovets and Kazarnovskaya placed 10 cc. of Shiga bacteriophage in 100 cc. of bouillon culture containing 1,500 millions of Shiga's dysentery bacilli per cubic centimeter. The autolysate was injected intravenously into rabbits. The animals became immunized against 10 lethal doses of dysentery toxin or of culture of living bacilli. Thus the immunity proved to be both antitoxic and anti-infectious. The antigen was also used in immunization of horses. About 1,650 cc. was injected within two and a half months. Blood was withdrawn nine days after the last injection, and the serum used for tests. The titer of the serum was determined on rabbits and mice. It appeared that 0.01 cc. of the serum having the weakest titer was capable of neutralizing 7 or 8 lethal doses of dysentery toxin. A few dysenteric patients were treated with this serum with encouraging results. The antigen can be obtained within two days, and immunization with this antigen does not cause any grave complications in the horse. Immunization of animals with autolysate of typhoid cultures is now going on.

Nederlandsch Tijdschrift v. Geneeskunde, Amsterdam

71: 453-536 (Jan. 22) 1927

*Cancer from Irradiation. L. F. Driessen.—p. 457.

*Sense of Equilibrium in Aviators. P. de Haan.—p. 463.

Medical Letters. H. J. Laméris.—p. 467.

Primary Cancer of Fallopian Tube. J. H. Engelkens.—p. 470.

Manic Depressive Insanity and Asthma. J. van der Torren.—p. 473.

Premature Symptoms of Old Age of Emotional Origin. S. Koster.—p. 475.

Cancer from Irradiation.—Basing his opinion on his own cases and those of others, Driessen asserts that there is not any danger of the development of cancer from deep roentgenotherapy of fibromyomas and benign hemorrhages. The stimulation has, on the contrary, a preventive effect on the development of cancer.

Sense of Equilibrium in Aviators.—Haan's studies show that the otolithic system in the aviator is of the greatest significance for "the feel of the airship," i. e., sensitiveness to and immediate reaction against very slight deviations from the normal equilibrium. In sudden inclinations, the aviator's head maintains its normal position in space on account of the labyrinth reflex. Deviations from the horizontal position are also shown by flexion of the spine. These changes in the body are utilized by the aviator for the rapid adjustment of the steering apparatus to restore the horizontal equilibrium. A trained aviator makes these adjustments automatically. The labyrinth reflex is less pronounced and compelling with a low oxygen supply, hence steering is less certain in higher air layers.